



Tropical Fresh Fruit Exporter's Guide to China

A market research report for local agri-businesses in Cambodia, Lao PDR, and Vietnam



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Data Notes

Official figures originally reported in Chinese yuan have been converted to US dollars using the USDA Economic Research Service (ERS) 2018 nominal annual country exchange rate of \$1.00 = 6.616 yuan.

Other figures reported during the period of this research use the USDA ERS 2019 nominal monthly exchange rate for December 2019 of \$1.00 = 7.021 yuan.

About the Project Support of Regional Economic Cooperation in Asia

On behalf of the Federal Ministry for Economic Cooperation and Development (BMZ), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is implementing the project “Support of Regional Economic Cooperation in Asia (SRECA)”. The project works with Cambodia, Lao PDR, Vietnam, Mongolia and the PR China. The latter takes on an active role as both an economic and development partner to support capacity building in the four neighboring countries. The objective is to improve conditions for regional and global agricultural trade in the four selected focus countries. Regarding its Southeast Asian component, the project focusses on private sector development and trade related-services in fresh fruit exports.

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About MZ Marketing Communications

MZ Marketing Communications (MZMC) is a fullservice marketing, communications, and public relations firm specialized in China market development for imported agricultural products. It is also the owner and operator of Produce Report, one of the leading trade media for fresh produce industry professionals with a focus on China. We provide expertise, resources, and talent to achieve highly impactful consumer and industry-targeted marketing campaigns. Our multilingual team of Chinese and international experts bring together insight and experience from multiple disciplines including marketing, trade, economics, and journalism. This allows us to design and implement creative, evidence-based market strategies based upon rigorous research and analysis.

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1 Executive Summary

China is the world's largest producer, importer, and consumer of fresh fruits. Rapid economic growth in recent decades has led to significant improvements in domestic fruit production, while average annual urban wages in China have risen dramatically from just over \$4,500 in 2009 to more than \$11,600 in 2018. These changes are fueling an evidence-based consumer demand for higher quality and greater varieties of fruits. In response, the Chinese government has been expanding trade relationships with fruit producing countries, and continuously adding to its list of fresh fruits permissible for import. As a result, over the past decade, the value of China's fresh fruit imports has soared from under \$1.2 billion in 2009 to over \$6.9 billion in 2018, with more than 200 fruits from 24 countries permissible for import in 2019.

This report examines the competitive market conditions in China for eight fruits, with a focus on trade between China and three ASEAN-member countries: Cambodia, Lao PDR, and Vietnam. Specific fruits considered include banana, mango, watermelon, longan, lychee, dragon fruit, durian, and jackfruit. To illuminate challenges and opportunities for these fruits and countries, market research was conducted from the period of September through December 2019. Field research activities included interviews with more than 20 traders and industry experts, as well as visits to wholesale markets, logistics centers, and border ports through which the largest volumes of tropical fruits are traded. Desk research included review and analyses of existing research, media reports, and official trade statistics.

Tropical fruits from Southeast Asia are among the most popular and successfully imported fruits in the Chinese market. By value, durians and bananas both rank among the top five in official trade figures, with durian imports valued at over \$1 billion in 2018—second only to cherries. By volume, banana is China's most imported fruit, with imports having reached over 1.5 million tonnes in 2018. Bananas are followed by dragon fruit, longan, and durian, accounting for four of the country's top five fruit imports by volume. While these figures demonstrate the significance of China's tropical fruit imports, trade volumes for some tropical fruits in fact are much higher than reported in official statistics due to the complex nature of trade along China's southern and southwestern borders.

Much of China's tropical fruit imports from Southeast Asia enter through the country's borders with Vietnam, Lao PDR (Laos), and Myanmar. Special border trade regimes originally intended to bolster local economies have in practice become utilised to import large volumes of fruits while avoiding higher VAT of standard trade regimes. This border trade not only complicates accounting of imports, but also often leads to additional product handling and breaks in the cold chain, which reduces product value and market prices. Upon entering China, fresh fruit shipments are generally traded through the country's largest wholesale markets, from where they are sold to distributors in regional wholesale markets and major retailers. While most fresh fruits are still purchased by consumers in traditional retail markets, e-commerce and new online-to-offline shopping formats are also playing an important role in promoting some tropical fruit imports.

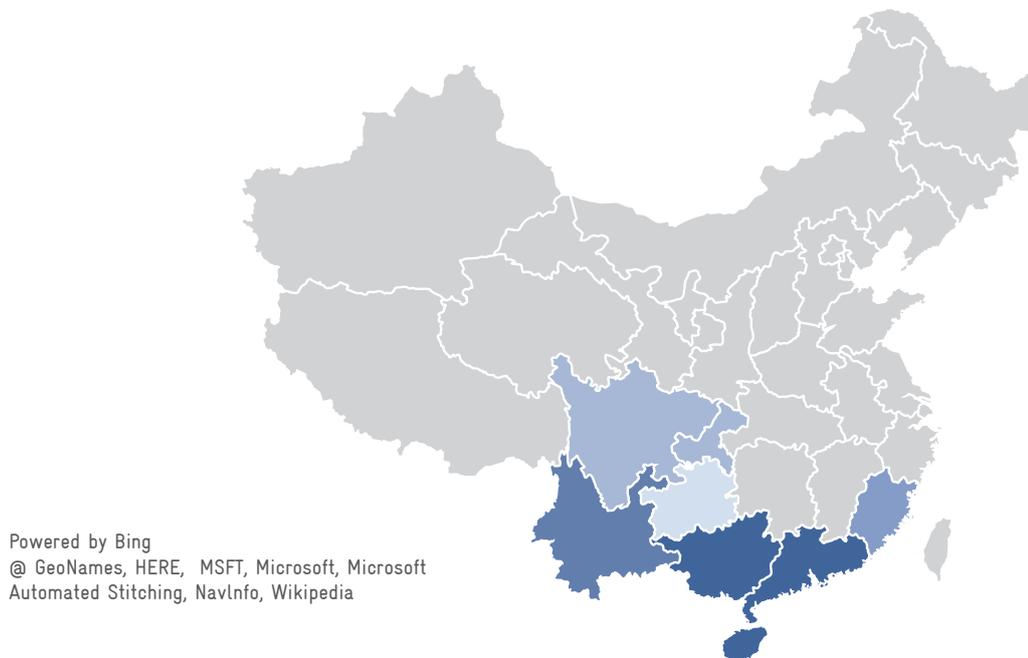
Cambodia, Laos, and Vietnam enjoy advantageous growing conditions for most tropical fruits compared to China. They also benefit greatly from lower costs of land and labor, logistical proximity to China, and a tariff-free trade agreement. However, fruit producers and exporters from those countries still face multiple challenges in the Chinese market including high consumer standards, market access issues, domestic competition for some products, and an imperfect cold chain. Individual growers often have limited ability to address these issues. In general, producers and exporters of tropical fruits can best face these challenges and optimise market positioning by coordinating at the industry level.

2 Market Overview

2.1 Production

Since the mid-1980s, China has remained the world's largest producer and consumer of fresh fruits. In 2017, China accounted for over 43% of global fruit production, having produced almost three times the volume of India, the second largest fruit producing country [1]. In 2018, China produced nearly 257 million tonnes of fresh fruit [2] and imported an additional 4.9 million tonnes [3]. Historically, China has exported only small quantities of fresh produce, meaning the aforementioned volumes are almost entirely consumed domestically. The country's enormous appetite for fresh fruits is largely a result of cultural traditions that prize their unique health benefits, and their important roles in celebrations and gift giving. Fresh fruits are also an important part of the typical Chinese diet.

Figure 1: Tropical Fruit Producing Regions

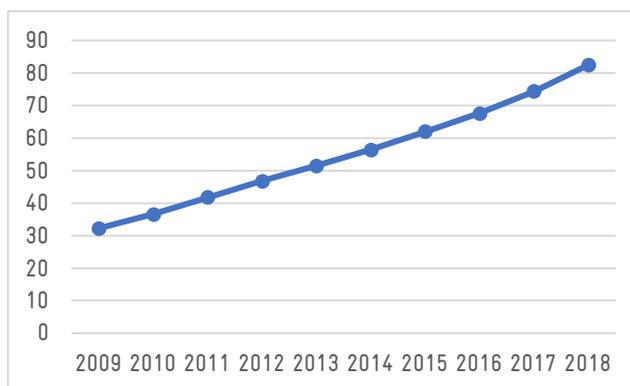


Structurally, Chinese agriculture has shifted in recent years from primarily small-scale family farming to currently include many large-scale commercial growers with significant investments in research and growing technology. This has not only improved domestic production of many fruits, but also allowed for China to begin growing fruits that were previously only available as imports, such as dragon fruit, durian, and avocado, among others. While large volumes of fruits are produced throughout China, tropical fruits are primarily grown in the southernmost provinces and regions, most of which enjoy subtropical climates. Guangdong, Guangxi, and Hainan have the greatest production volume of tropical fruits, followed by Yunnan and Fujian, with small quantities also grown in Sichuan and Chongqing.

2.2 Imports

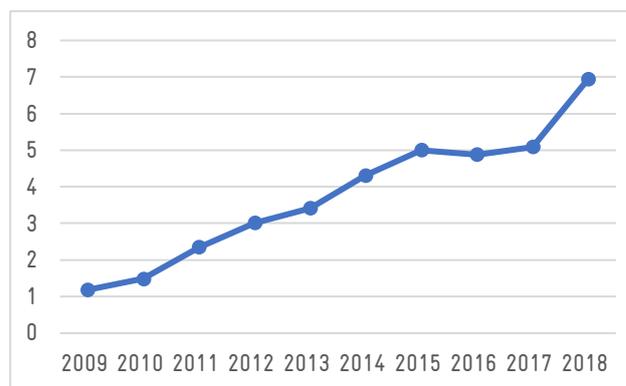
Rising incomes and a growing middle class have played an important role in China's ever-increasing demand for high quality domestically produced and imported fresh fruits.

Figure 2: Average Annual Urban Wage [2]



Unit: thousand RMB

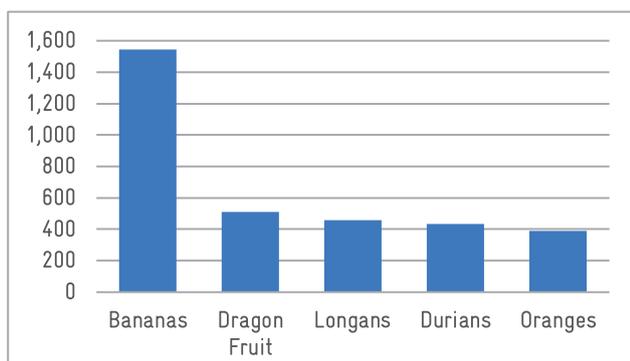
Figure 3: Fresh Fruit Imports [3]



Unit: billion USD

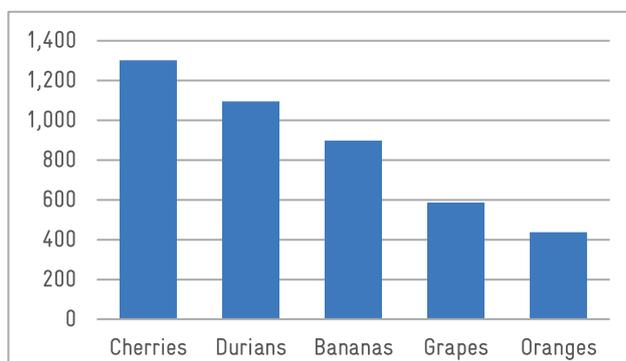
According to official statistics, average annual urban wages in China increased by 156% in the period of 2009 to 2018 from 32,244 yuan (\$4,569) to 82,461 yuan (\$11,684). During the same period, the value of China’s fresh fruit imports grew by more than 487% from under \$1.2 billion to over \$6.9 billion. The Chinese government has facilitated this rapid growth in imports by expanding trade relationships with fruit exporting countries, including through the establishment of free trade agreements, and steadily increasing the numbers of fresh fruits permissible for import into China. In 2019, 13 fresh fruits from 12 countries and regions were added to China’s official market access list [4].

Figure 4: Top Fruit Imports by Volume 2018 [5]



Unit: thousand tonnes

Figure 5: Top Fruit Imports by Value 2018 [5]



Unit: million USD

By volume, most of China’s fresh fruit imports are tropical fruits from Southeast Asia such as banana, dragon fruit, longan, and durian. While dragon fruit and longan do not rank among the top-five imports by value individually in official statistics, their combined values in 2018 of over \$762 million would rank fourth after banana, demonstrating the dominant presence of tropical Southeast Asian fruits in China’s imported fruit market. Additionally, official trade figures for some tropical fruits may significantly understate actual import volumes and values due to the complex nature of border trade and gray channel imports (see section 12). Fruit quality and varieties play an important role in Chinese demand. However, Southeast Asian fruit producers also benefit greatly from logistical proximity to China, as well as the zero-tariff regime of the ASEAN-China Free Trade Area agreement.

Figure 6: Market Access in 2019 [6]

	Official Market Access	Other Fruits in Market
Cambodia	Banana	Watermelon**, mango, durian, jackfruit, dragon fruit
Laos	Banana, Watermelon*	Mango, dragon fruit
Vietnam	Mango, longan, banana, lychee, watermelon, rambutan, jackfruit, dragon fruit, mangosteen*	Durian, passion fruit

*Official market access announced in November 2019 [7]. **Market access in progress.

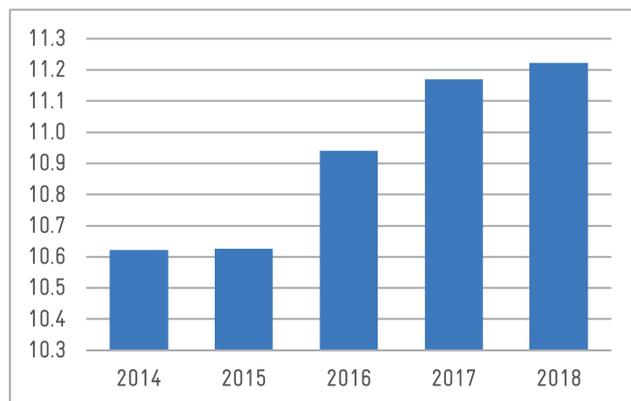
3 Banana

3.1 Overview

Production	11.2 million tonnes (2018)
Domestic Season	Year-round
Imports	1.5 million tonnes; \$896.8 million (2018)
Top Suppliers	Philippines, Ecuador, Vietnam, Myanmar, Thailand

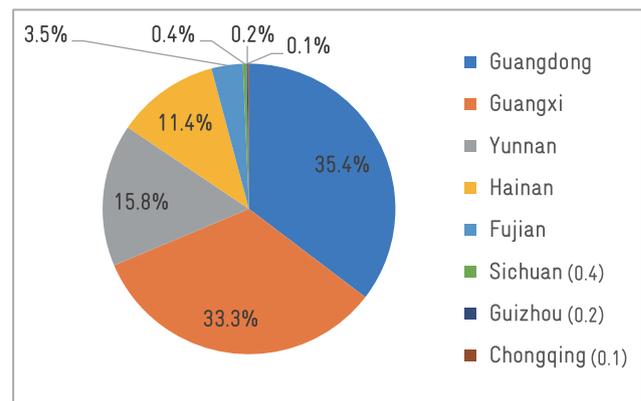
3.2 Production

Figure 7: Banana Production Volume [2]



Unit: million tonnes

Figure 8: Banana Production by Province [2]¹



Year: 2017 (Volume)

China is the world's second largest banana producer after India, with most production taking place in the country's southernmost provinces. In 2018, China produced 11.2 million tonnes of bananas, slightly more than the 11.2 million tonnes produced in 2017 with a total production area of over 351,000 hectares [2]². Guangdong, Guangxi, Yunnan, and Hainan account for over 90% of China's banana production, although small quantities are also produced in Fujian, Sichuan, Guizhou, and Chongqing.

China's average yield of 31.8 tonnes per hectare in 2017 demonstrates fairly low productivity for the Cavendish variety, the primary banana produced and consumed in China. Nevertheless, yields vary considerably across regions and provinces. In Guangdong province, for example, yields ranged from 16.2 to 49.3 tonnes per hectare across all counties in 2017 [8]. In China, banana trees are typically planted between May and September, then harvested between July and October the following year. Because of seasonal variation between banana producing regions, domestic bananas are available year-round, but with greater abundance in the summer months.

¹ 2017 most recent year with complete data

² 2018 production area not yet reported for all provinces

Although China’s banana production volume has increased modestly in recent years, those increases are largely due to improving productivity among professional growers. Over the past five years, Chinese plantation areas have been shrinking as some growers shifted production to Laos, which offers a more suitable climate as well as cheaper land and labour. However, those investments have raised both environmental and public health concerns in Laos over the heavy use of chemical pesticides and herbicides on Chinese banana plantations [9]. More recently, Chinese banana growers are looking toward Cambodia, which has similar growing conditions to Laos, and can serve as another production base to supply the China market. Cambodian bananas achieved official China market access in April 2019, and in November 2019 there were nine Cambodian banana plantations approved for export to China, some of which were funded by Chinese investors [10].

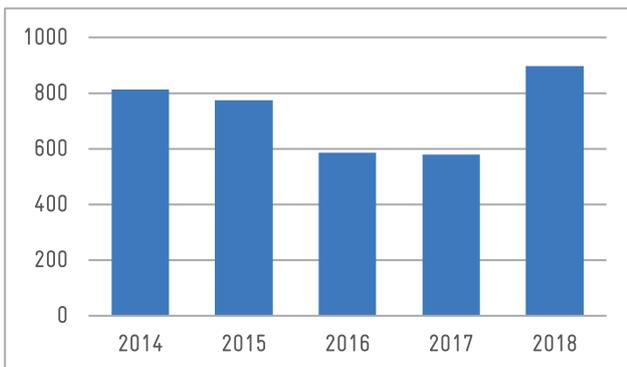
Table 1: China’s Banana Producing Regions

Region	Season in Market
Yunnan	January – May
Western Guangdong and Hainan	May – August
Guangxi	August – December
Eastern Guangdong and Fujian	August – December

3.3 Imports

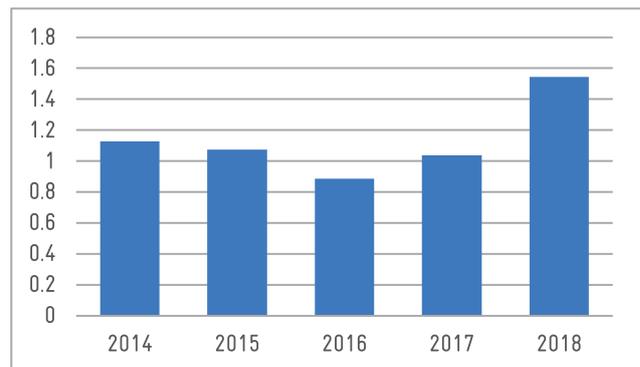
HS Code: 08039000 Other bananas, fresh or dried, excl. plantains

Figure 9: Banana Import Value [5]



Unit: million USD

Figure 10: Banana Import Volume [5]



Unit: million tonnes

Despite being the world’s second largest producer of bananas, China is also among the largest banana importing countries. In 2018, China imported over 1.5 million tonnes of bananas worth nearly \$897 million from 12 countries. The Philippines is the leading supplier of bananas to China with its 2018 import volume reaching over one million tonnes worth more than \$600 million—approximately two thirds of China’s total imports by both volume and value. Ecuador, Vietnam, Myanmar, and Thailand are also among the top-five leading banana suppliers to China. Other noteworthy suppliers of bananas to China in 2018 included Indonesia (\$9.8 million) and Costa Rica (\$4.6 million). According to official statistics, Laos exported small quantities of bananas to China in 2015, 2017, and 2018 with annual values of \$20,000 -30,000.

Official statistics show that only small quantities of Lao bananas were imported into China in 2015, 2017, and 2018 with annual values of \$20,000-\$30,000. However, it is widely reported among industry professionals that large quantities with significantly higher values enter China through the country's southwestern land border with Laos. While this trade is not new, Lao bananas only achieved official market access in May 2018 [11], which may explain the lack of representation in official data. According to International Trade Centre calculations, Laos exported \$183.5 million worth of plantains (HS code: 080310) to China in 2016, which are not reflected in China's official import statistics. It is also widely known that large Chinese investments in Lao banana production over the past several years are aimed at supplying the market in China. While not yet reflected in official statistics, Laos is likely already among China's top five banana supplying countries.

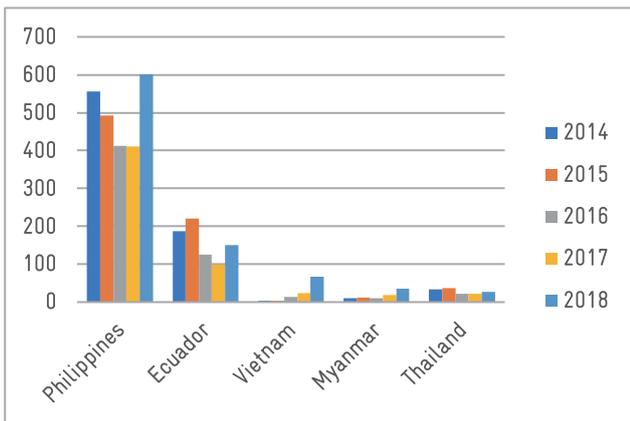


Workers transferring Lao banana shipment at a truck yard in the Yunnan province border city of Mohan



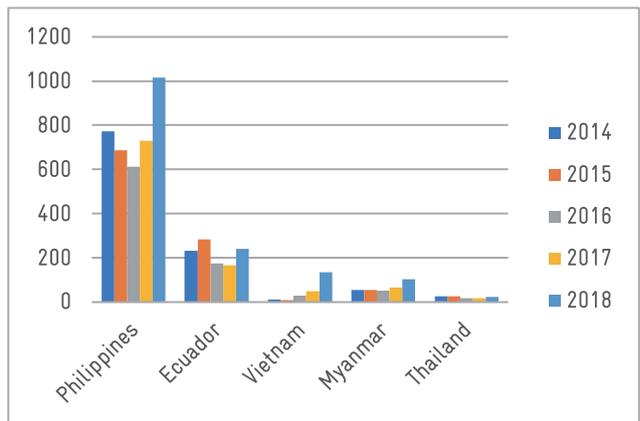
Lao bananas packed for shipment to China

Figure 11: Banana Import Value by Country [5]



Unit: million USD

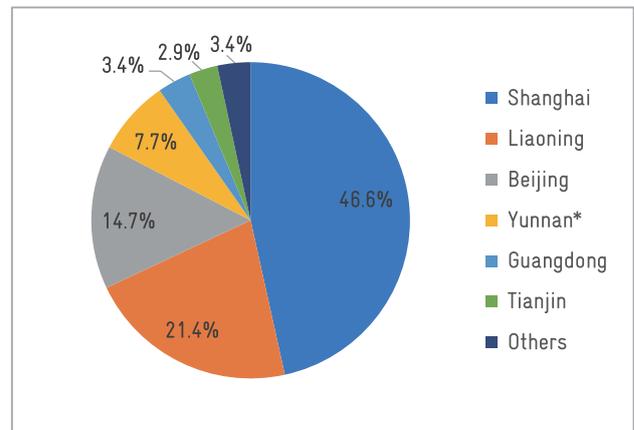
Figure 12: Banana Import Volume by Country [5]



Unit: thousand tonnes

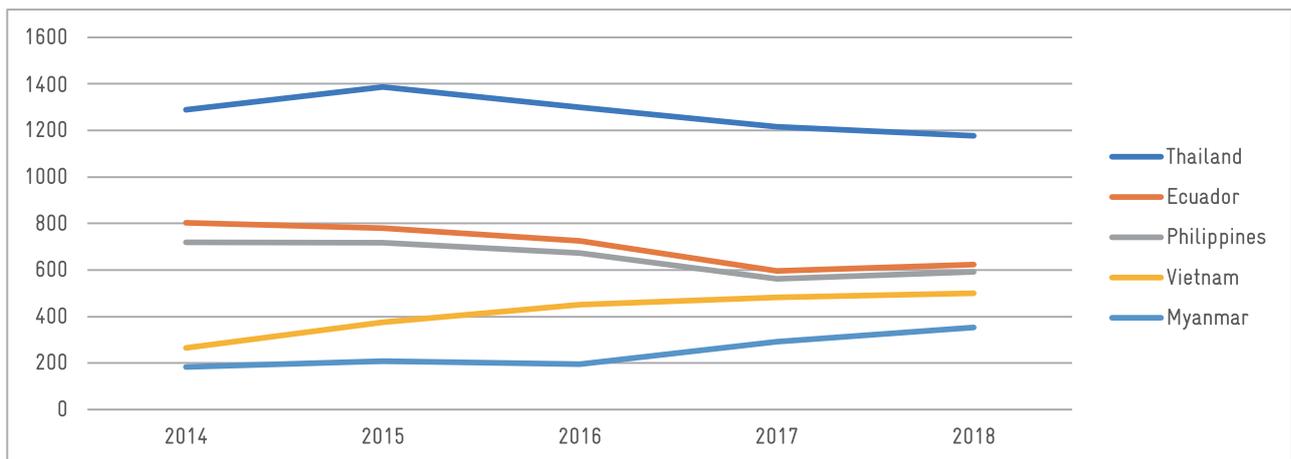
According to official statistics, in 2018 bananas were imported into 16 of China’s provinces and regions, with five of them accounting for 93% of all banana imports. Unlike the other banana importing regions, 79% of Yunnan’s banana imports entered via border trade with Myanmar. As explained above, this figure is likely to drastically understate Yunnan’s banana imports due to the complexity of border trade. Similarly, Guangxi imported some bananas in 2018 via border trade with Vietnam, however the total reported value of those imports was only \$44,365 — also likely a significantly understated value. China’s banana markets are known to experience extreme price volatility influenced by both domestic and Philippine supply shocks [12].

Figure 13: Banana Imports by Province [3]



Year: 2018 (Volume)

Figure 14: Average Banana Import Prices by Country [5]³ (USD/tonne)



Over the past five years, average import prices have generally been lower for bananas from Vietnam and Myanmar than for those from other countries. Bananas from the Philippines and Ecuador dominate retail markets in first-tier cities, and receive higher import prices due to better quality. According to industry experts, better planting technology, soil management, orchard management, and harvesting infrastructure allow bananas from the Philippines and Ecuador to arrive in China with less damage, better appearance, and better flavour. In particular, many plantations invested by leading banana brands have cableways to carry harvested bananas across fields with minimal handling. In Vietnam, most bananas are harvested and carried by hand, which causes more bruising and damage to the fruit. As a result, Vietnamese bananas are typically sold alongside domestic fruits in China, while those from the Philippines and Ecuador are easily marketed as imported products and receive higher prices. Since 2014, Thai bananas have consistently received import prices significantly higher than those from other countries, although import volumes are relatively low compared to the other top five suppliers.

3.4 Consumption

Bananas are widely consumed across all of China’s regions and income levels. Higher income markets tend to be less price sensitive and thus consume more of imported bananas with the highest quality.

³ Calculations based on aggregate data

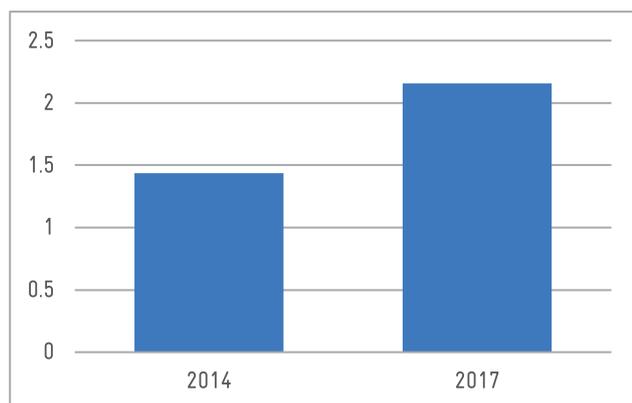
4 Mango

4.1 Overview

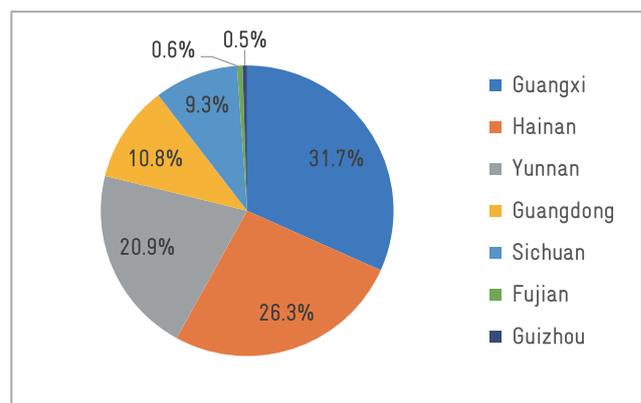
Production	2.2 million tonnes (2017)
Domestic Season	February – October
Imports	11,000 tonnes; \$20 million (2018)
Top Suppliers	Thailand, Taiwan China, Vietnam, Peru, Australia, the Philippines; Gray channel: Cambodia, Laos

4.2 Production

Figure 15: Mango Production Volume [8]



Unit: million tonnes

Figure 16: Mango Production by Province [8]⁴

Year: 2017 (Volume)

In 2017, China produced nearly 2.2 million tonnes of mangoes with an area of 253,000 hectares in seven provinces and regions, a 50% increase in volume and 45% increase in area compared to 2014. China's average mango yield was 8.5 tonnes per hectare in 2017, while yields across counties in Hainan province ranged from 6.3 to 14.1 tonnes per hectare. Hainan mangoes enter domestic markets in February and are mainly available from April to August. Guangxi, Guangdong and Yunnan mangoes largely enter domestic markets from June to September. Sichuan mangoes are mostly mid-maturing and late-maturing varieties that enter market from July to October.

Table 2: China's Mango Producing Regions

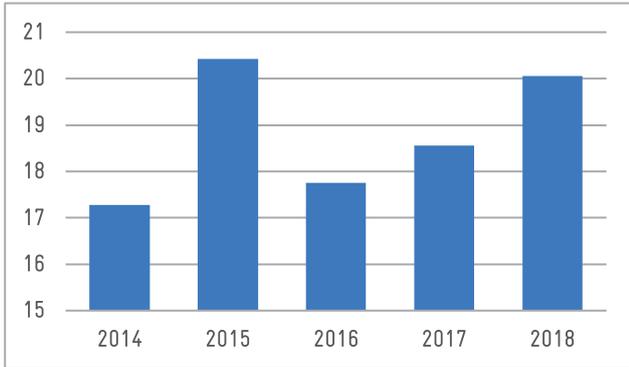
Region	Season in Market
Hainan	February – August
Guangxi, Guangdong, Yunnan	June – September
Sichuan	July – October

⁴ 2017 most recent year with complete data

4.3 Imports

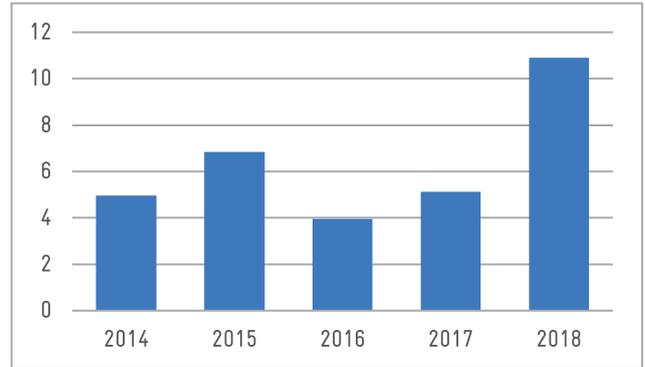
HS Code: 08045020 Mangoes, fresh or dried

Figure 17: Mango Import Value [5]



Unit: million USD

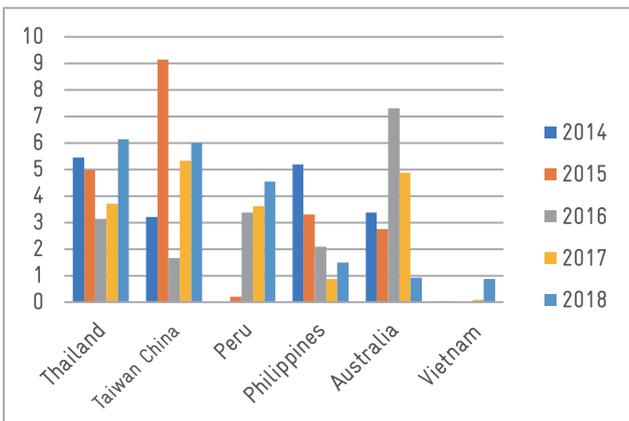
Figure 18: Mango Import Volume [5]



Unit: thousand tonnes

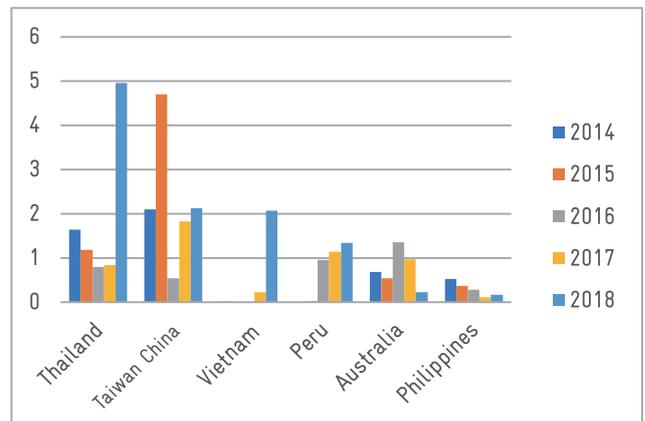
In 2018, China imported nearly 11,000 tonnes of mangoes worth over \$20 million from nine countries and regions, representing a 113% increase in volume but only an 8.1% increase in value compared to 2017. These increases were primarily driven by Thailand and Vietnam, the volumes of whose mango exports to China grew by 492% and 816%, respectively.

Figure 19: Mango Import Value by Country [5]



Unit: million USD

Figure 20: Mango Import Volume by Country [5]



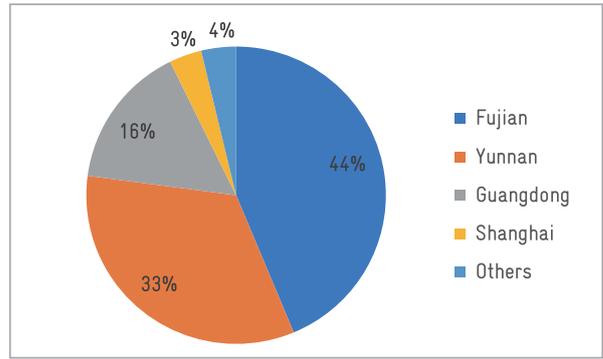
Unit: thousand tonnes

In addition to the leading suppliers, multiple other countries have exported small quantities of mangoes to China in recent years. Most notable among these countries are Ecuador and Pakistan, from which China imported 11.1 and 9.2 tonnes of mangoes in 2018, respectively. India also exported 1.8 tonnes of mangoes to China in 2018.

According to official statistics, mangoes were imported into 16 of China's provinces and regions in 2018 with Fujian, Yunnan, and Guangdong accounting for 93% percent of imports by volume. Thai mangoes enter China primarily through Yunnan province, while Vietnamese and Taiwanese mangoes are reported to enter China primarily via Fujian. Mangoes from the Philippines, Australia, Peru, and other countries primarily enter China via Guangdong, although small quantities are also imported into Shanghai, Shandong, Beijing, and other regions.

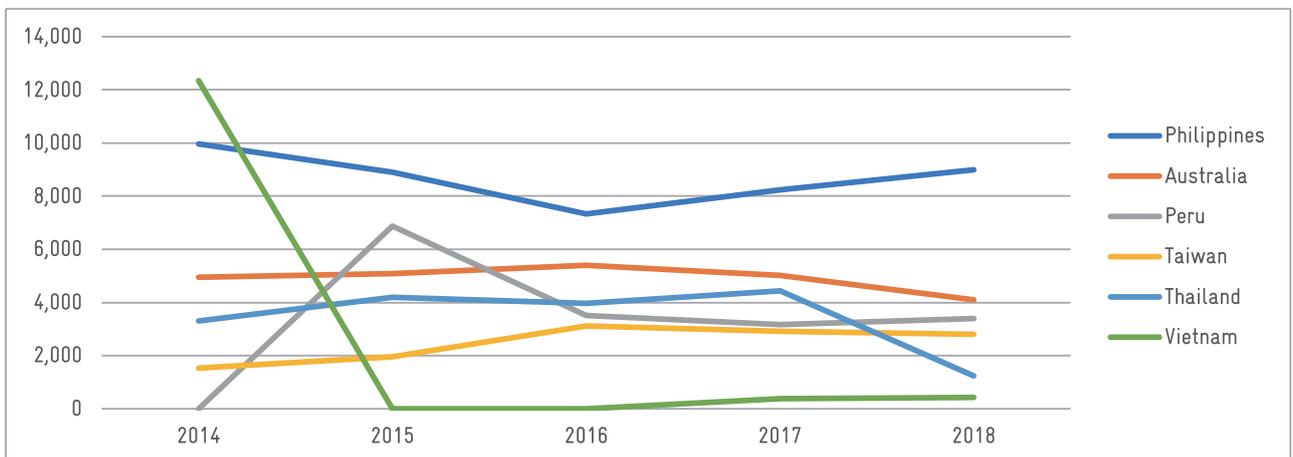
However, contrary to official statistics, industry experts have reported that as much as 90% of mango imports from Vietnam enter via border trade that is not accounted for in China Customs figures [13].

Figure 21: Mango Imports by Province [3]



Year: 2018 (Volume)

Figure 22: Average Mango Import Prices [5]⁵ (USD/tonne)



Over the past five years, mangoes from the Philippines have received average import prices significantly higher than those from other countries—in 2018, their average value was \$8,995 per tonne, more than double the average price of Australian mangoes, those with the next highest value. Thai mangoes saw a dramatic drop in import prices from \$4,438 in 2017 down to just \$1,238 in 2018. Since 2015, average import prices for Vietnamese mangoes have remained only a fraction of those received by other top suppliers at just \$423 per tonne in 2018.



Vietnamese mangoes are often packed with little or no protection from damage and require sorting and repacking by traders in Chinese wholesale markets. Due to overall lower quality, they are frequently sold as inexpensive domestic fruits in China.



Many Chinese domestic mangoes arrive in wholesale markets already sorted and packed to prevent damage.

⁵ Calculations based on aggregate data

4.4 Consumption

Mangoes are consumed throughout China, although consumption is the highest in the southern regions and in first- and second-tier cities. In addition to being consumed fresh, a relatively large portion of China’s domestic mangoes are processed into juice, preserved mango, and other products. Some of China’s most active mango producing regions have been marketing their products with geographic branding such as Sanya (city of Hainan Province) which is a local variety of yellow mango, and Panzihua from Sichuan province which is the larger red-blushed Kent variety. Most Vietnamese mango imports are of the green varieties, although many other varieties are also imported. Mangoes from the Philippines are generally regarded as the sweetest and highest quality among all imports..

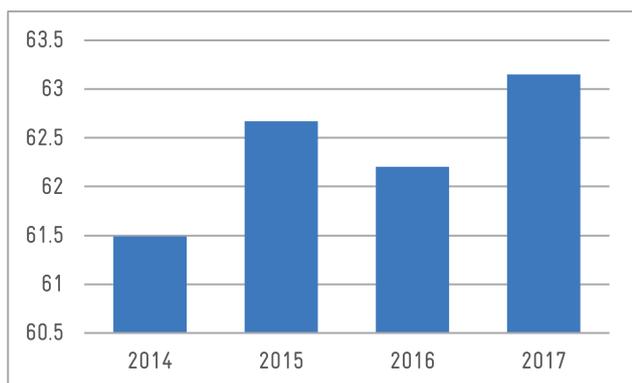
5 Watermelon

5.1 Overview

Production	63 million tonnes (2017)
Domestic Season	July – November
Imports	219.9 thousand tonnes; \$43.7 million (2018)
Suppliers	Vietnam, Myanmar, Laos; Gray channel: Cambodia

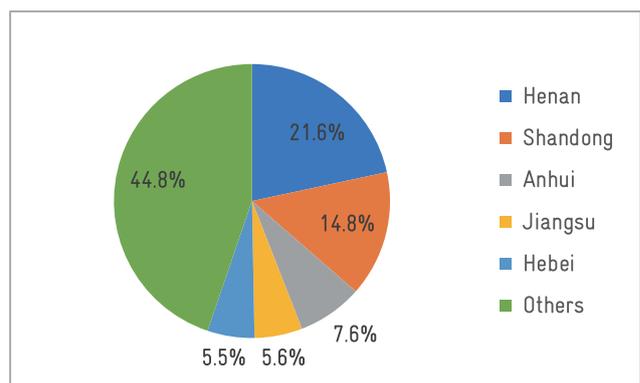
5.2 Production

Figure 23: Watermelon Production Volume [2]



Unit: million tonnes

Figure 24: Watermelon Production by Province [8]⁶



Year: 2016 (Volume)

China produces more watermelons than any other fruit. In 2017, China produced over 63 million tonnes of watermelons—a volume more than double the amount produced by the entire rest of the world combined. By contrast, the world’s second largest watermelon producer, Iran, produced 4.1 million tonnes, an amount equivalent to only 5% of China’s production volume [1]. Every province and region in China produces watermelons, although Henan and Shandong lead by a considerable margin. Overall, China’s average watermelon yield is

6 2016 most recent year with complete data

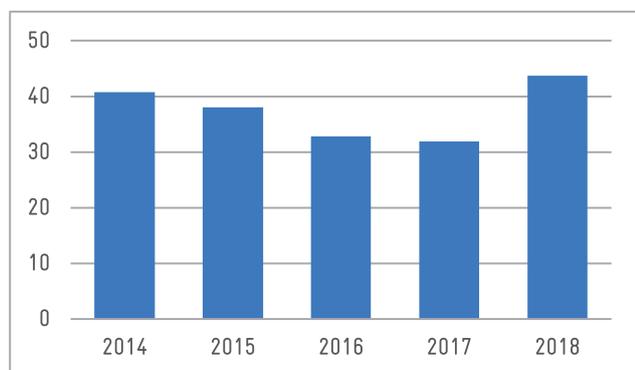
42 tonnes per hectare, while average yields range from 24 to 59 tonnes per hectare across all provinces and regions, with Henan achieving the highest average yield.

Domestically produced watermelons are mostly available from July to November. China's early watermelon varieties are typically planted in mid-March and enter domestic markets in mid-July, while late varieties are planted in mid-to-late April to reach markets from late July to early August. Open field cultivation of watermelons occurs in late June to mid-July and reaches markets in September to October. Greenhouse cultivation occurs in late July to early August and the harvests reach domestic markets in October. Additionally, small quantities of greenhouse and Hainan watermelons are often available in winter and spring.

5.3 Imports

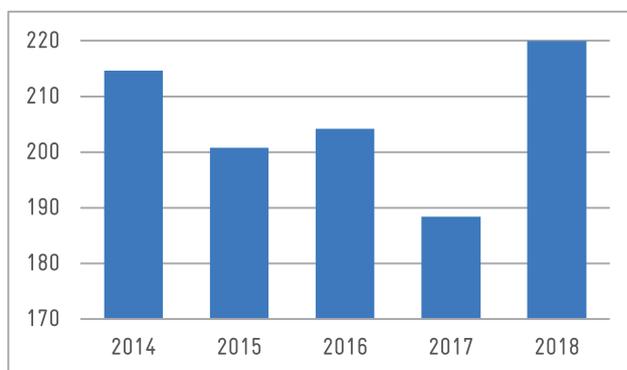
HS Code: 08071100 Watermelons, fresh

Figure 25: Watermelon Import Value [5]



Unit: million USD

Figure 26: Watermelon Import Volume [5]



Unit: thousand tonnes

In 2018, China recorded imports of 220,000 tons of watermelons worth \$43.7 million dollars. According to official figures, over the past five years more than 98% of China's watermelon imports have come from Vietnam, with the remaining small quantities primarily coming from Myanmar, and even smaller quantities coming from Malaysia. Official statistics also show 100% of Vietnamese watermelons enter China via border trade with Guangxi, while imports from Myanmar were valued at just \$354,000 in 2018⁷ and all entered via border trade with Yunnan province. However, industry experts have reported that China's watermelon imports may be significantly higher than reported as many shipments enter via border-citizen trade that is not accounted for in official figures (see section 11), and Myanmar is likely to be the largest watermelon supplier to China.

Average prices of watermelons imported from Vietnam in 2018 were \$199 per tonne, considerably more than Myanmar's \$127 per tonne, although less than Malaysia's \$398 per tonne⁸. Imported watermelons from Vietnam and Myanmar help to supply the market in the winter when domestic watermelons are least available.

5.4 Consumption

Watermelon is consumed across all regions and income groups in China. It is relatively affordable compared to other popular fruits, and is commonly served in restaurants, bars, karaoke venues, hotels, and tea rooms. It is also frequently used as an ingredient in freshmade juice and tea beverages. According to the production and import figures, China had a per capita watermelon consumption of over 55 kilograms in 2018.

⁷ Actual volumes and values may be understated due to border trade

⁸ Calculations based on aggregate data



Vietnamese watermelons at the fresh fruit wholesale market in Kunming, the capital of Yunnan province



Vietnamese watermelons packed for China with sticker showing production location, packing house, and exporter details

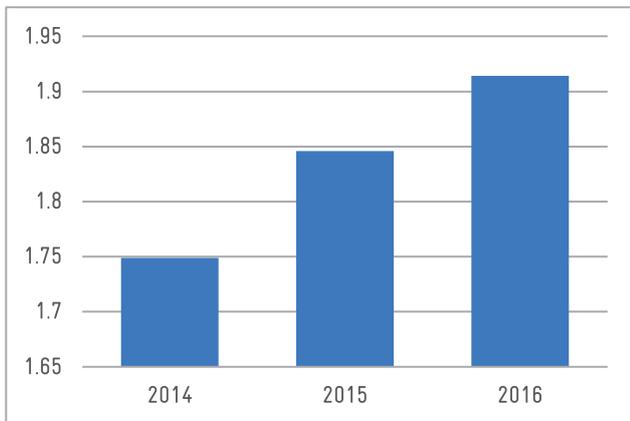
6 Longan

6.1 Overview

Production	1.9 million tonnes (2016)
Domestic Season	July – October
Imports	457,000 tonnes; \$365.6 million (2018)
Suppliers	Vietnam, Thailand

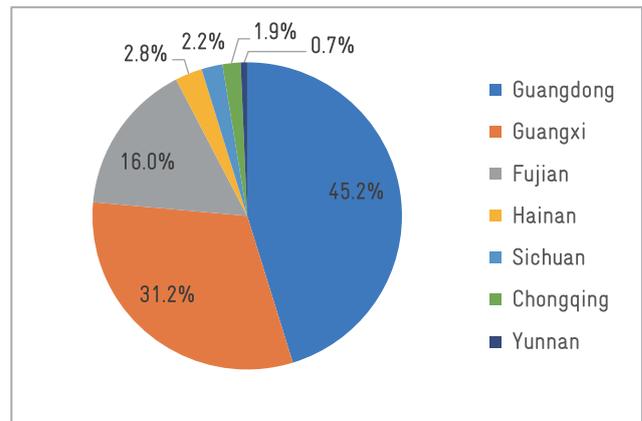
6.2 Production

Figure 27: Longan Production Volume [8]



Unit: million tonnes

Figure 28: Longan Production by Province [8]⁹



Year: 2016 (Volume)

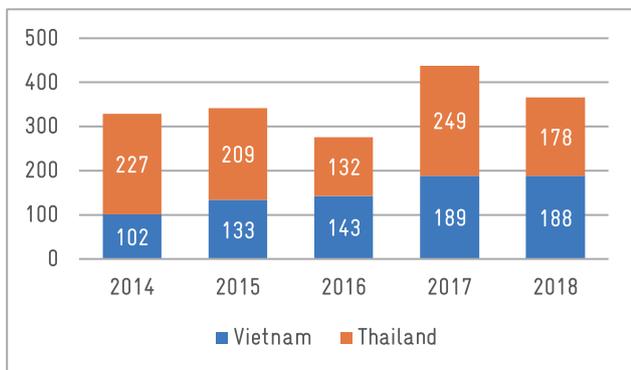
9 2016 most recent year with complete data

In 2016, China produced over 1.9 million tonnes of longans with an area of 310,000 hectares, representing slow but steady increases in both volume and production area over the previous two years. Guangdong, Guangxi, and Fujian accounted for over 92% of China's longan production in 2016, with 2017 showing similar figures, although data are not yet reported for all other longan producing regions. China's average longan yield is 6.2 tonnes per hectare, while yields across counties in Guangdong province ranged from 2.4 to 12.1 tonnes per hectare. Longan trees are usually planted in the spring and autumn and require three to four years to begin bearing fruit. China's longans are harvested and available in domestic markets from July through October.

6.3 Imports

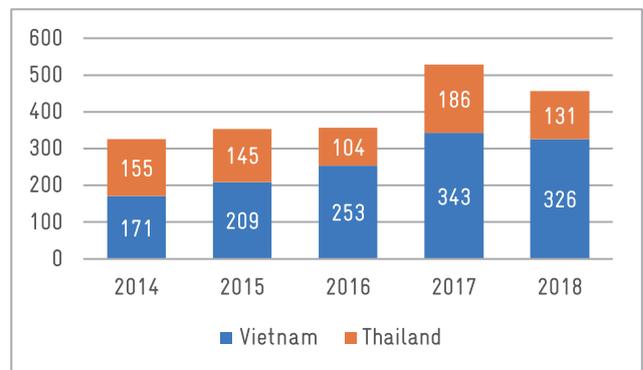
HS Code: 08109030 Longan, fresh

Figure 29: Longan Import Value by Country [5]



Unit: million USD

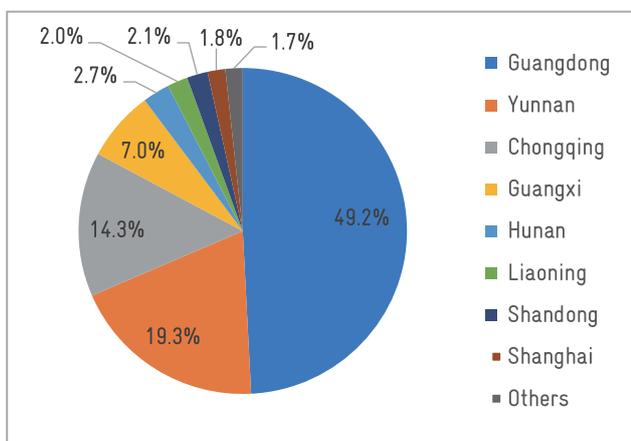
Figure 30: Longan Import Volume by Country [5]



Unit: thousand tonnes

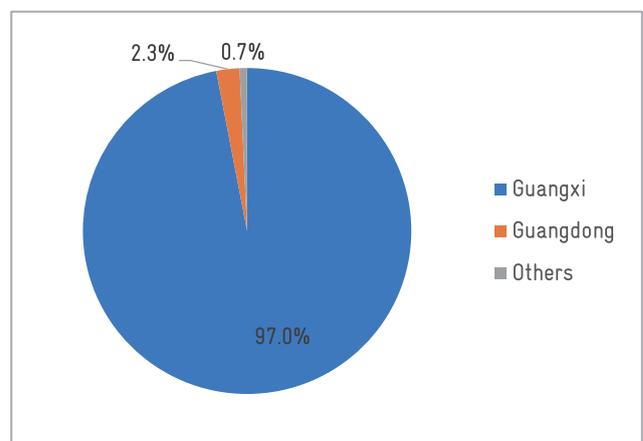
Official figures from 2018 show, China imported nearly 457,000 tonnes of longans worth over \$365.6 million, a slight decrease from 2017, but still representing modest increases over the previous three years. Over the past five years, Vietnam and Thailand have been the only countries to export longans to China, except for Laos which exported 115 tonnes of longans to China in 2017. Thai and Vietnamese longans enter China through different channels and receive dramatically different import prices.

Figure 31: Thai Longan Imports by Province [3]



Year: 2018 (Volume)

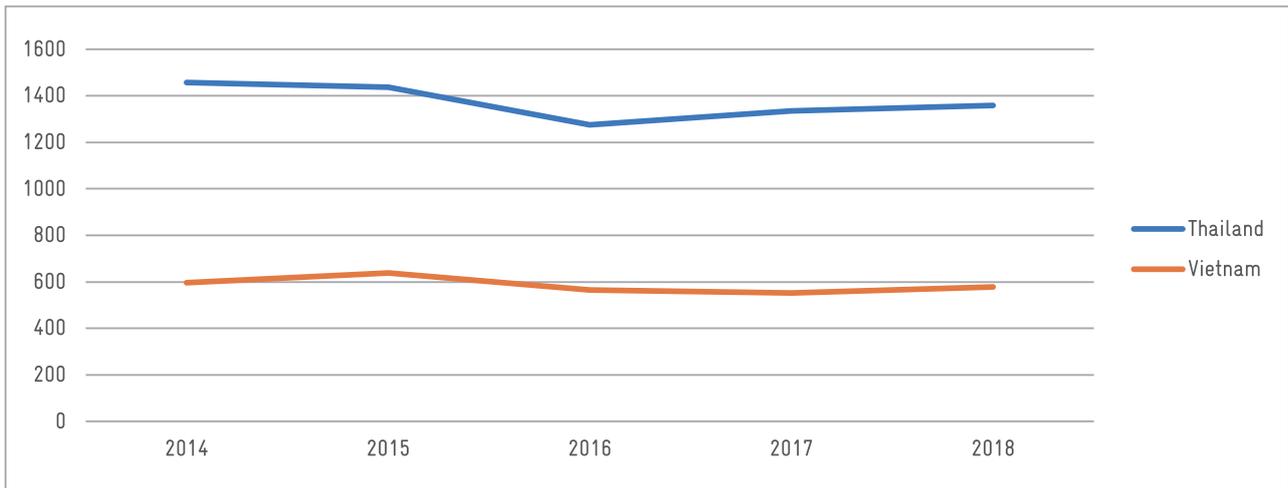
Figure 32: Vietnamese Longan Imports by Province [3]



Year: 2018 (Volume)

According to China Customs statistics, Thai longans are imported by 13 of China's provinces and regions, although nearly half enter through Guangdong. Vietnamese longans are imported by six provinces and regions with 97% of those imports entering via border trade with Guangxi. Over the past five years, prices stayed stable but Thai longans have received more than double the import prices of Vietnamese longans.

Figure 33: Average Longan Import Prices¹⁰ (USD/tonne)



6.4 Consumption

According to industry experts, longans are primarily consumed fresh, with less than 30% used for further processing [8]. Longan consumption is reportedly greater in China's southern regions where consumers have better understanding of the fruit's quality and freshness characteristics such as color, texture, flavor, and ripeness.



Longans at the Nanning wholesale fruit market. Industry experts report that phytosanitary rules require all stems and leaves to be removed, and the longans should not be attached to any stems or branches—requirements that Thai exporters tend to follow more strictly than those from Vietnam.



Longans for sale in a Walmart in Nanjing are described as imported without naming the country of origin.

¹⁰ Calculations based on aggregate data

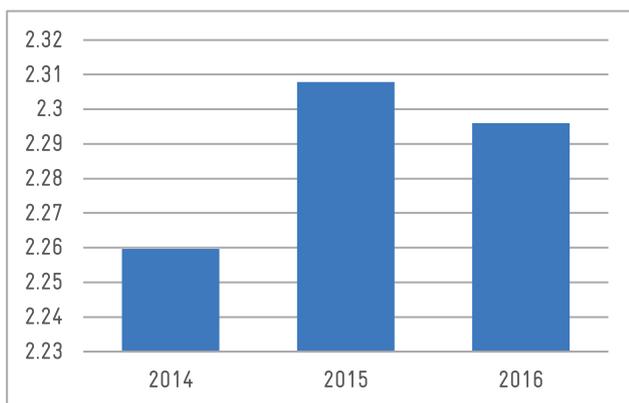
7 Lychee

7.1 Overview

Production	2.3 million tonnes (2016)
Domestic Season	Mid-May to mid-August
Imports	32,500 tonnes; \$17.3 million (2018)
Suppliers	Vietnam, Thailand

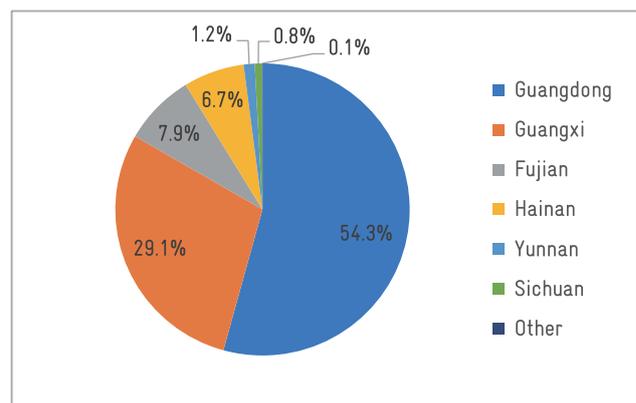
7.2 Production

Figure 34: Lychee Production Volume [8]



Unit: million tonnes

Figure 35: Lychee Production by Province [8]¹¹



Year: 2016 (Volume)

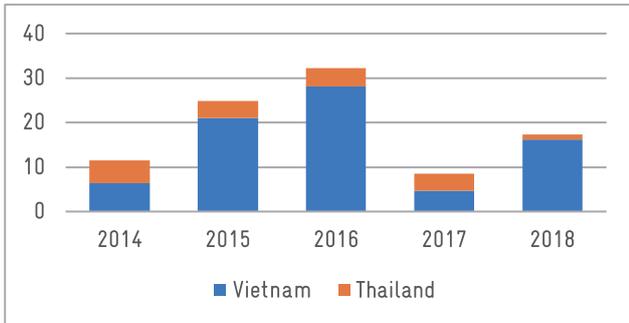
China has a long history of lychee production and remains a major grower of the fruit. Between 2014 and 2016, China's lychee production remained steady at around 2.3 million tonnes with a growing area of approximately 540,000 hectares. Guangdong province accounts for over half of China's lychee production volume, with yields ranging from 1.6 to 13.6 tonnes per hectare across the province's lychee growing counties in 2017. In 2016, China's overall lychee yields averaged of 4.2 tonnes per hectare. Lychee trees can be planted in the spring, summer, and autumn. A new lychee tree requires two to three years to produce fruit, and five to six years to reach full fruit production. Domestic lychees are harvested and available in China's markets from mid-May to mid-August, although June through July is the main season.

¹¹ 2016 most recent year with complete data

7.3 Imports

HS Code: 08109010 Lychee, fresh

Figure 36: Lychee Import Value by Country [5]



Unit: million USD

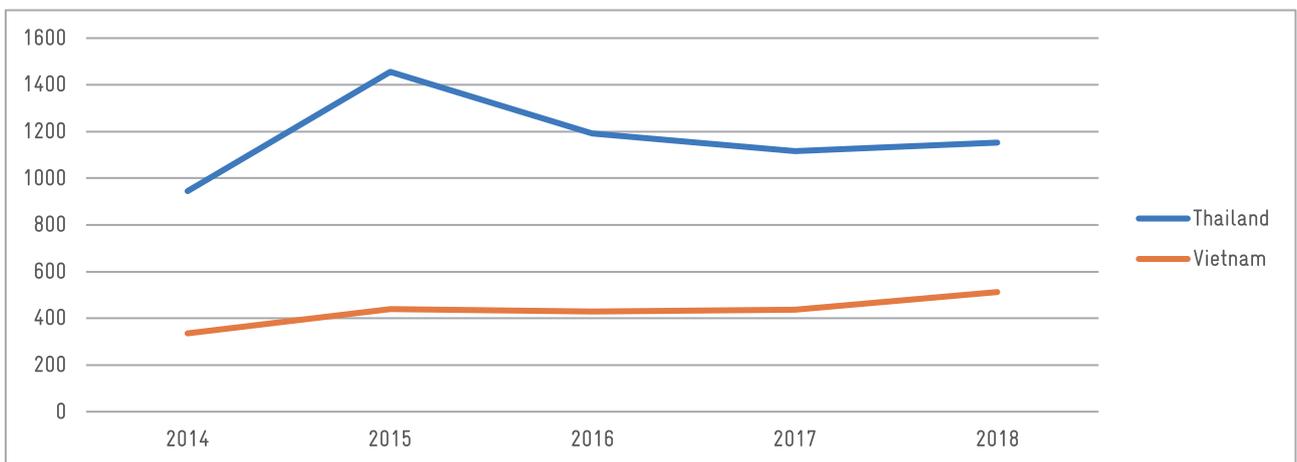
Figure 37: Lychee Import Volume by Country [5]



Unit: thousand tonnes

In 2018, China imported 32,500 tonnes of lychees worth \$17.3 million. Those from Vietnam accounted for 97% of imports by volume and 93% by value, with the remainder of imports coming from Thailand. Although imports from Thailand have been far lower than from Vietnam over the past five years, the two countries achieved similar import values in 2014 and 2017, as Thai lychees receive more than double the import price of those from Vietnam. In 2018, over 93% of lychee imports entered China via border trade between Vietnam and Guangxi—an amount that is likely understated due to border citizen trade that is not accounted for by China Customs. The remaining 7% was imported into Yunnan, Hainan, and Guangdong provinces. Vietnamese lychees are reported to generally be of lower quality than domestically produced lychees. They are usually traded along with domestic fruits in wholesale markets and help to fill seasonal gaps.

Figure 38: Average Lychee Import Prices [3]¹² (USD/tonne)



7.4 Consumption

According to industry experts, approximately 80% of lychees are consumed as fresh fruit, while 20% are used as raw material for further processing [8]. Due to the fresh fruit's high value, as well as high costs of storage and transportation, at least half of all lychees in China are consumed near the main producing areas in the south, while the remainder is distributed to major urban areas throughout the country

¹² Calculations based on aggregate data

8 Dragon Fruit

8.1 Overview

Production	700,000 tonnes (2018)
Domestic Season	May – November
Imports	511,000 tonnes; \$397 million (2018)
Suppliers	Vietnam; Gray channel: Laos, Cambodia

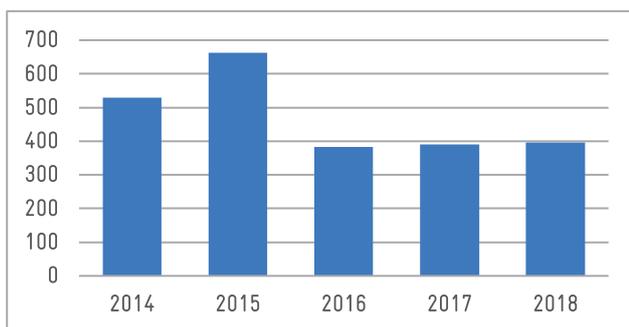
8.2 Production

In 2018, China was estimated to have produced approximately 700,000 tonnes of dragon fruits with a growing area of approximately 40,000 hectares [14] [15] [16]. Among dragon fruit producing provinces and regions, Guangxi has the largest growing area of approximately 13,000 hectares, followed by Guangdong with 10,000 hectares, and Hainan and Guizhou, each with approximately 6,600 hectares. Domestic dragon fruit production has increased rapidly in the past decade, while further expansion in 2020 is expected to continue and put downward pressure on market prices. Domestic dragon fruits are mainly available from May to December with production peaking around July and are mostly of the red fleshed variety which generally has a less premium appearance than imported dragon fruits.

8.3 Imports

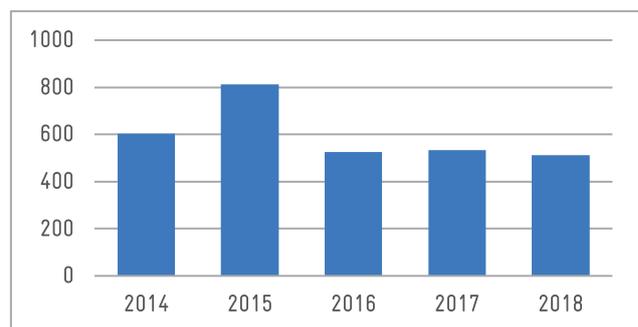
HS Code: 08109080 Dragon fruit, fresh

Figure 39: Dragon Fruit Import Value [5]



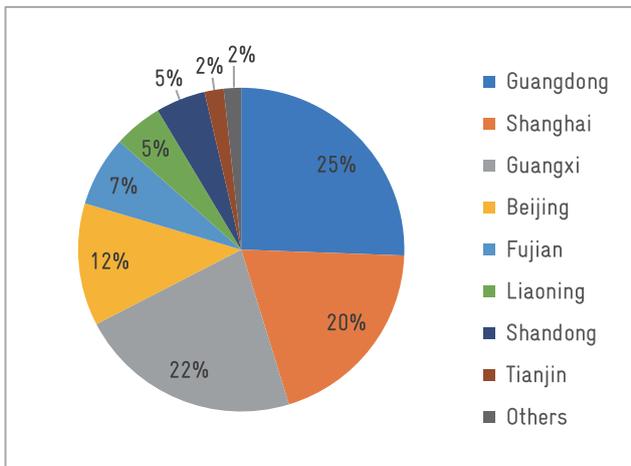
Unit: million USD

Figure 40: Dragon Fruit Import Volume [5]



Unit: thousand tonnes

Figure 41: Dragon Fruit Imports by Province [3]



Year: 2018 (Volume)

Official figures show China’s dragon fruit imports have remained steady over the past three years at over 500,000 tonnes worth nearly \$400 million. Over the past five years, more than 99.9% of China’s imported dragon fruits have come from Vietnam. In 2018, imports from Taiwan China were valued at \$220,000, while small quantities were also imported from Philippines, Malaysia, and Thailand in 2014 and 2015.

Vietnamese dragon fruits are imported into 14 provinces and regions. Those arriving in Guangdong, Shanghai, and Beijing had average values of \$817, \$890, and \$868 per tonne¹³, respectively, considerably higher values than those received by other major entry regions. Nearly 20% of all Vietnamese dragon fruits entered China via border trade with Guangxi at an average value of \$630 per tonne — the lowest value among all importing provinces and regions. However, actual import volumes may be significantly higher than those reported in official figures, as border citizen trade is not accounted for in China Customs statistics.

8.4 Consumption

Dragon fruits are primarily consumed fresh in China’s southern regions, as well as in first- and second-tier cities. According to industry experts, consumer preferences have shifted in recent years from white-fleshed dragon fruits to the red-fleshed varieties. Compared to domestic dragon fruits, Vietnamese dragon fruits typically have a better appearance and longer shelf life.



Vietnamese trucks carrying containers of dragon fruit are unloaded at the Pingxiang border in Guangxi and loaded onto smaller trucks for border crossing under the border citizen trade regime.



Boxes of Vietnamese dragon fruit are reloaded and packed floor-to-ceiling in Chinese trucks for domestic shipment.

13 Calculations based on aggregate data

9 Durian

9.1 Overview

Production	Experimental; no commercial production
Domestic Season	NA
Imports	432,000 tonnes; \$1.1 billion (2018)
Suppliers	Thailand; Gray channel: Vietnam

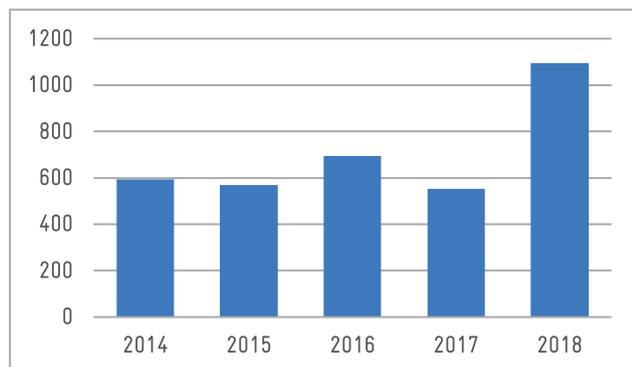
9.2 Production

China does not currently have any commercial durian production. However, due to the fruit's popularity and high value, farmers in China's southernmost province Hainan have been experimenting and experiencing some initial success with trial plantations. The Hainan Academy of Agricultural Sciences has established a durian plantation demonstration area, while local agricultural officials are reportedly urging farmers to wait until more research has been done before planting durian seedlings commercially [17]. As durian trees require four to five years to bear fruit, and longer to reach commercial levels of fruit production, Chinese domestic durians are not expected to play a significant role in the domestic market within the next several years.

9.3 Imports

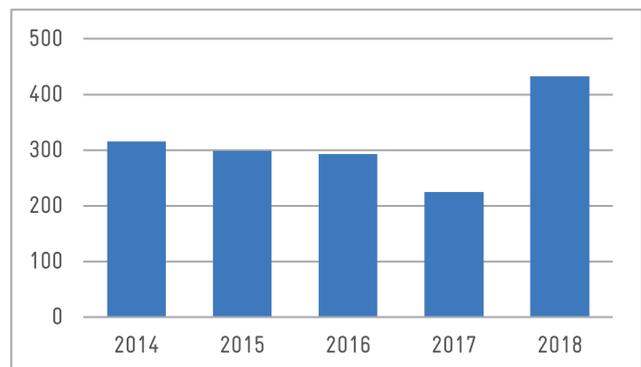
HS Code: 08106000 Durian, fresh

Figure 42: Durian Import Value [5]



Unit: million USD

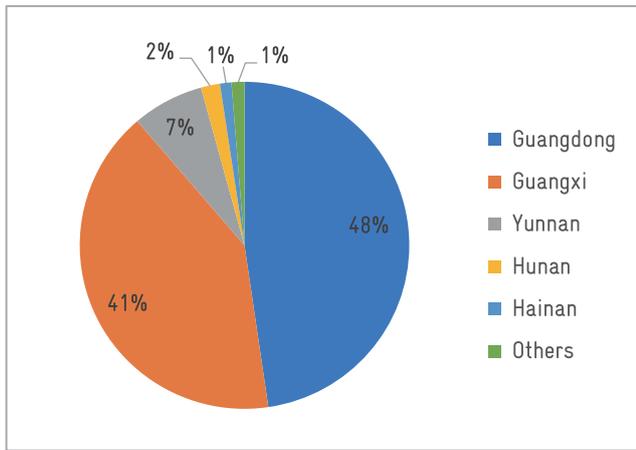
Figure 43: Durian Import Volume [5]



Unit: thousand tonnes

According to official statistics, 100% of China's durian imports come from Thailand, the volume and value of which nearly doubled in 2018 compared to 2017. In 2018, imports of Thai durians reached 432,000 tonnes worth nearly \$1.1 billion. This makes durian China's second most valuable fruit import after cherries. However, it is well known among industry professionals that Vietnamese durians have played a significant role in the market in recent years. Vietnamese durians previously filled the seasonal winter gap when Thai durian imports were lower. By adding competition to the market, they also helped to offset Thai durian prices. But in 2019, China was increasingly cracking down on illegal Vietnamese durian imports, while the two countries engaged in official market access negotiations. During the period of this research, Vietnamese durians were unavailable in major wholesale fruit markets around China, but could still be found in some wholesale markets near the border.

Figure 44: Durian Import Volume by Province [3]



Year: 2018 (Volume)

In 2018, 15 provinces and regions imported Thai durians, however 96% of durians were imported by just three provinces and regions: Guangdong, Guangxi, and Yunnan. Although Vietnamese durians are not represented in official statistics, they are known to primarily enter China via border trade with Guangxi. Average import prices for Thai durians have increased by 35% over the past five years from \$1,878 per tonne in 2014 to \$2,535 per tonne in 2018.

In 2019, whole frozen durians from Malaysia gained China market access. Previously, only the frozen durian pulp had been permitted for import and was used as an ingredient in a wide range of durian-flavored food products. However, the whole frozen durians are reported to be of high quality and optimal ripeness, and can be consumed directly in the off season when fresh durians from Thailand are unavailable [18] [19].

9.4 Consumption

As China's second most imported fruit by value after cherries, durian has become one of China's favorite imported fruits, with e-commerce playing an important role in its rising popularity. In the spring of 2018, China's e-commerce giant, Alibaba Group, signed an agreement with the government of Thailand to purchase \$473.6 million worth of Thai durian over a three-year period. To celebrate the agreement, a promotion on Alibaba's Tmall platform saw 80,000 Thai durians sold in less than one minute [20]. Shortly after, China's other leading e-commerce platform JD.com signed a purchase order of six million Thai durians, while another e-commerce player, Suning, sold 200 tonnes of Thai durian in just two days [21]. In 2019, durian remained a popular fruit and the target of many consumer promotions in both online and offline retail.

10 Jackfruit

10.1 Overview

Production	10,000+ hectares (estimated) (2018)
Domestic Season	June – October
Imports	Official figures not available, no HS code
Suppliers	Thailand, Vietnam

10.2 Production

Although official national-level production figures are not available, China's total jackfruit production area is estimated at a minimum of 10,000 hectares. At least 6,000 hectares of growing area is located in Hainan, while other relatively small growing areas are dispersed

throughout Guangdong, Guangxi, Yunnan, Sichuan, and Fujian. Most domestic production is of the yellow fleshed varieties [22] [23] and is available in domestic markets from June to October.

10.3 Imports

Although official figures for jackfruit imports are not reported by China Customs, industry experts say imports have been increasing rapidly in recent years in response to the growing popularity of the fruit. The Jiaxing Haiguangxing Wholesale Fruit Market in Zhejiang province near Shanghai reported a jackfruit trading volume in 2016 of only 2,349 tonnes. But in 2017, the figure had increased more than 10-fold to nearly 30,000 tonnes, and reached almost 40,000 tonnes in 2018. From September 2018 to September 2019, the market reports to have traded 55,000 tonnes of jackfruit. Due to the rapid growth in imports, the market established a specialized jackfruit trading area, the largest of its kind in China [24]. During a visit to the market, approximately one out of 40 containers of jackfruit was reported to be domestically grown, while those from Vietnam and Thailand were far more abundant and of superior quality.

Most imported jackfruits from both Thailand and Vietnam enter China over land via border trade at the Guangxi-Vietnam border. According to data from the Thai Consulate-General in Shanghai, Thai jackfruit is available year-round but production peaks in April and May. In 2018, Thailand exported nearly 40,000 tonnes of jackfruit to China worth approximately \$15 million, accounting for 47% of Thai jackfruit exports by volume and 56% by value. However, industry experts say that Vietnamese jackfruits are more popular and account for a higher total import volume than those from Thailand. Imported Vietnamese jackfruits are mostly of the red fleshed varieties, which are considered to have better flavor than the yellow fleshed varieties from Thailand.

10.4 Consumption

Due to the fruit's relatively recent rise in popularity, most jackfruit in China is consumed fresh, as few Chinese companies have the ability to process jackfruit at scale given the fruit's unique structure.



Workers unloading a jackfruit shipment at the Jiaxing Haiguangxing Wholesale Fruit Market. The Jiaxing market has become a leading distribution center for jackfruit as labor costs in the area are relatively low, allowing traders to efficiently peel and pack the fruit for sale to retailers.



Jackfruit peeling and packing workshop at the Jiaxing market. In addition to such workshops, some retailers prefer to peel and pack the fruit on site in order to attract customers and demonstrate freshness.

11 Logistics

11.1 Overview

Since the establishment of the ASEAN-China Free Trade Area (ACFTA) in 2002, trade between China and ASEAN-China countries has grown rapidly. From 2002 to 2018, China's imports from ASEAN-China under the 08 HS code category (edible fruit and nuts; peel of citrus fruit or melons) increased more than 16-fold from just over \$216 million to nearly \$3.8 billion [5]. Sea freight to China's largest eastern ports remains the most common shipping method for fresh fruit exporters. However, China's southern and southwestern land borders with Vietnam, Laos, and Myanmar are also entry points for large volumes of fruits from those countries, as well as from other ASEAN-member countries. While shipments from ASEAN-member countries enter China tariff-free, they are still subject to VAT or other taxes depending on the port of entry and import regime.

11.2 Sea Freight

Sea freight is relatively inexpensive compared to other forms of transportation, and generally enters China through ports nearest to the largest wholesale and consumer markets for fresh fruits. Shenzhen, Shanghai, and Tianjin are among the most common entry points for fresh fruit shipments arriving by sea due to the large numbers of leading importers and distributors operating in nearby wholesale markets. From these markets, products can quickly be sold and distributed locally, regionally, and nationally. The primary disadvantage of sea freight is the transportation time, which can be considerably longer than land transport. Additionally, fruit shipments from Southeast Asia arriving in China by sea are subject to a 9% VAT by China Customs¹⁴, a higher rate than is applied to some shipments arriving over land (see next section).

11.3 Guangxi Border Trade

Modern cross-border trade between Vietnam and China's Guangxi region first developed in the early 1980s but became more active as the relationship between Vietnam and China normalized in the 1990s, and continued to grow rapidly following the establishment of the ACFTA in the early 2000s. Guangxi has an especially advantageous geographic position for cross-border trade with ASEAN-member countries: it has a long land border with Vietnam extending 1,020 kilometers, 12 ports of entry including both sea and land ports, as well as 26 cooperative centers for border residents to conduct transactions with their Vietnamese counterparts. Additionally, highway networks running through Vietnam and towards the Chinese border allow shipments from Vietnam, Laos, Cambodia, and Thailand to reach Guangxi land ports much faster than by sea freight.

Four Guangxi land ports have been specifically designated for the import of fresh fruits: Pingxiang, Longbang, Dongxing, and Shuikou. Additionally, fresh fruits are permitted to be imported via the sea ports of Fangchenggang and Qinzhou Free Trade Zone, as well as via the airport of Guilin. The Pingxiang port is the most significant port in Guangxi for fresh fruit shipments and includes four entry points under its jurisdiction:

Table 3: Pingxiang Port Entry Points for Fresh Fruits

Pingxiang Railway	Ordinary trade (very small volume)
Youyiguan	Ordinary trade
Puzhai	Small-volume border trade; border resident trade
Nongyao	Border resident trade

14 Refers to ordinary trade—not transshipments, customs warehousing, or other trade regimes.

While some other Guangxi border ports only have permission to import Vietnamese fruits, the Pingxiang port entry points are permitted to import nearly all fruits from ASEAN-member countries that have achieved official market access, making it one of China's most significant entry ports for ASEAN-member fresh fruit shipments. Shipments entering China via these points are typically imported under one of the following three regimes:

Table 4: Common Land Port Import Regimes

Ordinary Trade	Small Volume Border Trade	Border Resident Trade
Shipments imported by registered Chinese importers. Fresh fruits are subject to the same 9% VAT as those entering China via sea ports as ordinary trade shipments.	Shipments imported by officially registered companies in the border area. Subject to VAT of 3%.	Chinese citizens living near the country's border may import products worth up to 8,000 yuan (\$1,139) daily VAT-free. A customs clearance fee of 7,500 to 12,000 yuan (\$1,068 to \$1,709) per container is collected by the local government rather than by China Customs. .



Border residents wait in line to scan their fingerprints and register their trades

Ordinary trade is the most common trade regime for imports at all China ports, but shipping times are often faster and overall costs may be lower for shipments using land transport and entering under border trade regimes. Additionally, the cold chain is more likely to be broken for shipments entering China via border-resident trade, potentially putting downward pressure on prices for fruits imported under that regime..

The largest volumes of fresh fruits entering China via land transport are shipped through the Pingxiang port on the border of Guangxi and Vietnam, and nearby border trade markets. At one market for border resident trade, dozens of Vietnamese trucks can be seen carrying 40-foot refrigerated containers of fresh dragon fruits. The cargo is unloaded on onto smaller, unrefrigerated trucks for import by border residents who must scan their fingerprints in an adjacent transaction market to confirm their daily quota is not exceeded. Cargo from the small trucks is then reloaded onto 45- to 48-foot containers for distribution throughout China. Shipments from this port take 3-4 days to reach major wholesale markets around Chin



Border trade import regimes were initially intended to support the development of local economies and livelihoods in the border regions. However, in practice, they have become channels through which large volumes of trade flow in order to avoid higher VAT. Furthermore, because taxes for border resident trade are not collected by China Customs, overall trade volumes and values under that regime are not counted in national-level customs statistics that do include ordinary trade, small volume border trade, and other import regimes. Some experts have estimated that border resident imports of fresh fruits may be as much as 10 times the volume imported under small volume border trade, implying that national-level border trade statistics drastically understate actual trade volumes for some products.



Truck entering China at the Youyiguan port



Puzhai border trade area

11.4 Yunnan Border Trade

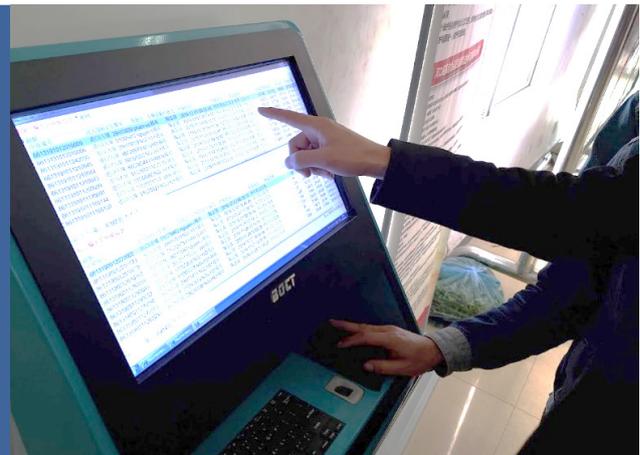
In Yunnan province, ports with significant border trade volumes for fresh fruits include Hekou (China-Vietnam), Mohan (China-Laos), and Ruili (China-Myanmar). A smaller port named Tianbao also links China with Vietnam, but is reportedly seeing less volume of fruit in recent years due to poor highway links to other parts of Yunnan and the rest of China.

In general, ports in neighboring Guangxi have more developed infrastructure and offer more direct transportation links between Vietnam and China when compared to Yunnan's Hekou port. Nevertheless, Hekou is able to lure some trade away from Guangxi by offering lower import fees of only 2,000 yuan per container under the border-resident trade regime. This is significantly lower than the 7,500 to 12,000-yuan fee at Guangxi's Pingxiang port. However, savings in import fees at Hekou may be partially offset by higher onward transportation costs to leading consumer markets in first- and second-tier cities around China.

Vietnamese dragon fruit accounts for the greatest volume of fresh fruits imported through Hekou followed by Vietnamese longan, both of which primarily enter under the border resident trade regime. Import volumes of other fruits – mainly Vietnamese durian and passionfruit – are relatively low, as China has become increasingly strict in 2019 regarding imports of fruits that have not yet achieved formal market access. All fruits entering China must meet traceability requirements including that each box be labeled with the product description, country of origin, orchard code, and packing house code



One Hekou-based logistics company reported that in 2018, when trade in fresh fruit reached its all-time peak, there were around 300 containers of fruit arriving daily. The same source said that volumes fell to roughly 150 containers per day during peak season of 2019, and to only about 50 per day during the low season in December. In December 2019, during a time of low volume and resulting greater competition between logistics companies, researchers were quoted a price of 10,000 yuan to truck a refrigerated container from Hekou to eastern China.



An electronic border trading system for use by border residents in Hekou. Several border residents must use their full daily trading quota for each truckload of fruit imported from Vietnam.



Laotian bananas packed for export to China seen at the Mohan border

The China-Laos border port of Mohan in Yunnan's Xishuangbanna prefecture is part of a well-established overland trade route linking Thailand to China via Laos, through which large volumes of Thai longan, durians, and other fresh fruits are imported. There is also a significant volume of Lao bananas being imported through Mohan, the handling of which is quite different from shipments from Thailand.

Compared to import procedures of Lao fruits, overland shipment of fruits from Thailand to China is a relatively mature and standardised process. All Thai fruits are shipped in refrigerated containers, with a variety of Thai and Chinese logistics companies competing to offer this service. Increasingly, companies either operate in both Thailand and China or have an agreement to share containers with their counterpart in the other country. This means at the Mohan border crossing area, it is possible to transfer

containers from a Thai truck to a Chinese truck for shipment to the final destination within China, rather than breaking the cold chain and moving the entire shipment from one truck to another. Lao bananas, on the other hand, are stacked unrefrigerated, and are typically transferred by hand from one truck to another at the border trading center in Mohan, similar to the handling of border resident fruit imports at Guangxi's Pingxiang port.

The majority of Lao bananas being imported into China at Mohan are produced by Chinese companies with growing bases in Laos. Nevertheless, with prices in December of 2019 as low as 2.5 yuan per kilogram free on board (FOB) to Mohan, Lao bananas are clearly not considered a premium product in the China market.

China has taken out a 99-year lease on the piece of land that adjoins Mohan on the Laos side of the border, known in Chinese as Moding. This area has been declared an economic zone and is undergoing large-scale construction. The Mohan border crossing is typically very congested, with wait times of one day or more within the special economic zone common for trucks headed from Laos into China. A new border gate is being constructed, with more vehicle lanes and green channels for agricultural goods, which may help fresh fruits cross the border more quickly in the future. The eventual completion of railways linking Vientiane to Kunming via Moding may also provide a new and faster means of shipping fresh fruit overland from Laos to China.



The truck transloading yard within the Moding special economic zone. Whole containers or the contents of containers are transferred from Lao or Thai trucks to Chinese trucks

11.5 Gray Channel

Gray channels typically refer to the distribution of goods outside officially licensed or approved channels. In the context of imports into China, the gray channel often refers to the illegal smuggling of goods over the Chinese border in order to avoid tariffs, VAT, phytosanitary controls, or other restrictions. Hong Kong's status as a free port that does not levy any tariffs on imported goods—as well as its close geographic, economic, and cultural ties to mainland China—has long made the city a primary hub for gray channel shipments. The significance of this trade has often been easily revealed by Hong Kong customs statistics showing import volumes far greater than can be explained by the city's domestic consumption or reexports. In addition to Hong Kong, gray channel trade is also known to take place along China's southern land borders, although the scale is more difficult to estimate. As China has become increasingly strict in its treatment of corruption and illegal trade, risks for gray channel imports have grown. These include product seizure, fines and prison sentences for illegal importers, and harming trade relations with China Customs. Exporters of fresh fruits to China are recommended to take these factors into consideration and avoid gray channel trade as much as possible.

12 Distribution

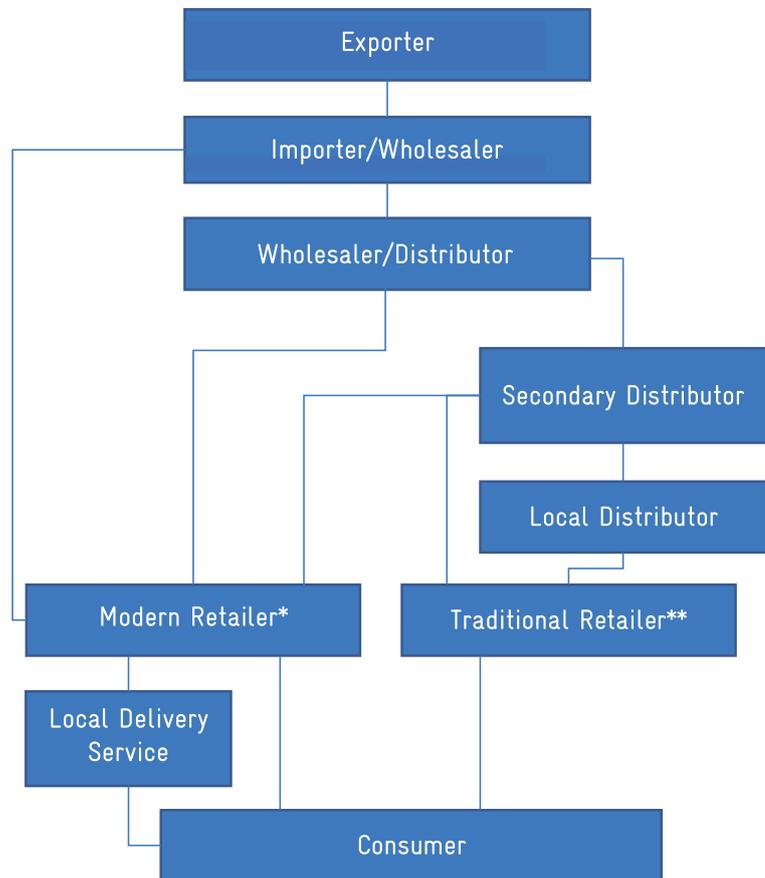
12.1 Supply Chain

China's supply chain for imported fruits largely follows the country's traditional supply chain for fresh produce characterised by multiple wholesale markets, traders, and distributors between producer and consumer. However, growing demand for high-quality, high-value fresh fruit varieties has seen many supply chains streamlined and upgraded in recent years in order to gain a competitive market edge and meet expectations of higher-income consumers. The most extreme example of this may be the online pre-harvest ordering of Chilean cherries, and the charter flights allowing them to reach Chinese consumers in insulated, cold-packed boxes within days of harvest. This is in stark contrast to the more common, traditional consumer purchasing from local supermarkets, wet markets, or street vendors of fruits that may have already passed through several traders and wholesale markets. Modern supply chains vary between these two extremes depending upon product value, target markets, and partnerships with importers, distributors, retailers, and marketers. Fresh fruit exporters wishing to establish brand recognition in China must pay careful attention in choosing their local partners along the supply chain through which their products will travel before reaching consumers.

Figure 45: Traditional Supply Chain



Figure 46: Imported Fruit Supply Chain



12.2 Wholesale Markets

China's largest importers and distributors of fresh fruits typically have offices and operations in the wholesale markets closest to major ports and the greatest consumer markets. Among these, Guangzhou's J.N.H. Market (formerly known as the Jiangnan Fruit and Vegetable Wholesale Market) is the country's largest imported fruit wholesale market due to its proximity to the ports of Shenzhen, Hong Kong, and the city's high level of consumption. It has been reported that more than 70% of all imported fresh fruits in China are initially traded through importers and distributors in the J.N.H. market [25]. Similarly, the Jiaying Market near Shanghai is East China's leading wholesale market for Southeast Asian fruits, while Shanghai's Huizhan Fruit and Vegetable Market and other nearby wholesale fruit markets also play important roles in China's fresh fruit imports and distribution. In Beijing, the Xinfadi Market plays a leading role in regional distribution throughout North China due to its proximity to the port of Tianjin, and the city's high level of consumption. Every province and region in China has at least one major wholesale market for fresh fruits, usually in the provincial capital, from which the region's largest distributors operate.



The Jiaxing Fruit Market near Shanghai is locally known as the "old market" and primarily sells domestic fruits along with some imported Southeast Asian fruits such as bananas, watermelons, and mangoes. The nearby Jiaxing Haiguangxing Market is locally referred to as the "new market" specialized in imported fruits, and has become known in recent years as a leading wholesale market for some imported Southeast Asian fruits. From September 2018 to September 2019, the Haiguangxing market reports to have transacted 110,000 tonnes of Vietnamese dragon fruit and 55,000 tonnes Vietnamese jackfruit.



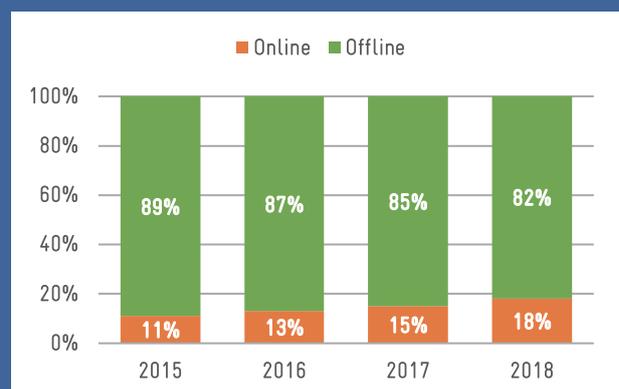
At the Pingxiang Jiangnan ASEAN E-commerce Industrial Park in Guangxi, truckloads of Vietnamese mangoes can be seen being transferred between traders. Market management explained those mangoes were all imported under the border resident trade regime. The market also hosts many online businesses operating stores on China's leading e-commerce platforms.

Southeast Asian fresh fruits imported into China are primarily distributed through the leading wholesale fruit markets. Even those fresh fruit shipments entering China via land ports in Guangxi or Yunnan will often be shipped directly to wholesale markets in Guangzhou, Shanghai, Beijing, and other high consumption urban areas, while some will be distributed regionally through wholesale markets in south and southwest China's second-tier cities. With large numbers of importers and distributors operating in these markets, product handling, storage, and transportation standards can vary widely and have significant impact on product quality and value. Fresh fruit exporters are strongly encouraged to visit their import and distribution partners in the wholesale markets in which they are based in order to understand how their products are handled and distributed in practice.

12.3 Retail

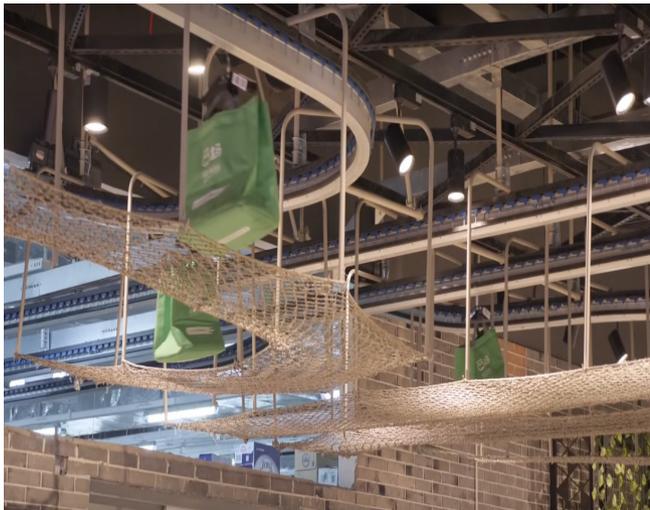
China's large geographic scale and economically diverse population fosters wide ranging retail formats for fresh fruits. These include traditional street-cart and wet markets vendors, small retail shops, large supermarkets, hypermarkets, and wholesale clubs, as well as e-commerce and tech-enabled online-to-offline (O2O) shopping with rapid home delivery. While traditional offline shopping retains a dominant market share for imported fresh fruits, e-commerce and O2O shopping for fresh fruits have experienced significant growth in recent years.

Figure 47: Retail Sales of Consumer Goods [2]



Between 2015 and 2018, online retail sales of consumer goods grew from 11% to 18% of China's total retail market share. According to a study by iResearch, the gross merchandise value of fresh food e-commerce in China grew during the same period from 49.7 to 184.8 billion yuan. Within the fresh food e-commerce category, fresh fruit accounts for most consumer purchasing, while that for vegetables, seafood, and meat remained relatively small in comparison [26].

In addition to traditional retail and e-commerce, China has developed its own unique retail formats combining brick and mortar retail, app-based ordering, and rapid home delivery to meet increasingly high consumer demands for fresh product quality and shopping convenience. Commonly referred to as “new retail,” e-commerce giant Alibaba has dominated this segment with its highly successful Hema brand quickly expanding and driving new investments from competitors such as Jingdong, Walmart, Yonghui, and Carrefour in similar offerings. New retail stores offer a traditional brick and mortar retail experience, upgraded to include mobile-app checkout, remote ordering, and home delivery, usually within 30 minutes to two hours. By serving as both traditional retail outlets as well as warehouses and fulfillment centers for online orders, new retail stores have effectively solved the “last kilometer” logistical challenge that remains the primary constraint for standard fresh fruit e-commerce.



While customers fill their baskets and check-out via mobile phone app using Alibaba’s Alipay payment service, Hema staff traverse the store fulfilling online orders which are carried on conveyer belts above the shoppers to the store’s packing and delivery section. In this way, the new retail model has combined traditional retail with warehousing and online order fulfillment into a single location. The model has proved so successful at bridging the gap between online and offline retail, many traditional retail chains around China are now fitting their existing locations with similar equipment and staff dedicated to fulfilling online orders.

For retailers that do not have their own e-commerce sales channels, independent grocery and food delivery services fill the remaining gaps between online and offline shopping. Alibaba’s primary competitor in China, Jingdong (JD), provides the JD Daojia delivery service through which its staff do the offline local shopping and delivery for customers ordering groceries online, bringing e-commerce customers to traditional retailers such as Walmart, Yonghui, and Pagoda.

Before the ‘new retail’ business format got popular, fresh fruit e-commerce companies had to invest heavily in cold chain logistics and local storage in order to maintain product quality over the distances between their warehouses and customer’s doors—a model that has also seen success. Missfresh, for example, is a leading fresh grocery mobile e-commerce app from which customers’ orders are rapidly delivered from over 1,500 small local warehouses. At the same time, growing consumer standards for convenience, quality, and freshness has also driven developments in traditional retail. Pagoda, for example, is the pioneer among China’s boutique fresh fruit retail chains having grown from less than 400 locations in 2012 to nearly 4,000 locations in 2019. These stores offer premium fresh fruits and specialized staff in residential neighborhoods throughout China.

Figure 48: Leading Retailers for Imported Fresh Fruits

Supermarkets and Hypermarkets	E-commerce Platforms
CR Vanguard	Tmall
Sun Art (RT Mart and Auchan)	JD
Walmart	Pinduoduo
Yonghui	
Carrefour	O2O and Home Delivery
	Fresh Hippo (Hema)
Fresh Fruit Chain Stores	JD Daojia
Pagoda	Missfresh
Xianfeng	Dingdong

13 Regulatory Environment

13.1 GACC

The General Administration of Customs of China (GACC) is the primary body governing the policies, regulations, and product inspection related to the country’s fresh fruit imports. Reporting directly to the State Council, GACC has 60,000 employees. It is comprised of 18 different departments, eight subsidiaries, and four associations, with representative offices around the world. Since the restructuring of China’s government in 2018, GACC has taken over several key tasks for which the Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) was previously responsible, including taking control over China Inspection and Quarantine (CIQ). GACC’s roles and responsibilities include the following:

Figure 49: GACC Roles and Responsibilities

Regulatory	Enforcement
<ul style="list-style-type: none"> Granting and revoking market access for foreign products Determining phytosanitary requirements for each product/ country based upon site visits and risk assessments Signing and implementing agreements and intergovernmental treaties on quarantine protocols Publishing up-to-date lists of fresh fruits approved for import into China, as well as of officially registered packing houses and orchards 	<ul style="list-style-type: none"> Acting as entry port inspection agents able to seize goods in cases of missing or incorrect documentation Collecting relevant taxes and duties, including value added taxes (VAT), tariffs, excise duties, and other taxes Conducting quarantine inspections at ports and points of entry into China Ensuring appropriate product labeling of imports Seizing suspected counterfeit, smuggled, and IPR-infringing imports

13.2 Market Access

New exporters of fresh fruit to China must first determine the status of the products they wish to export by referring to the official market access list¹⁵. For products that are not in the official list, market access negotiations with GACC must be initiated by the government of the product’s country of origin, usually through the agricultural section of its embassy in China. For GACC, assessing phytosanitary risks associated with the product is the primary focus in processing market access applications.

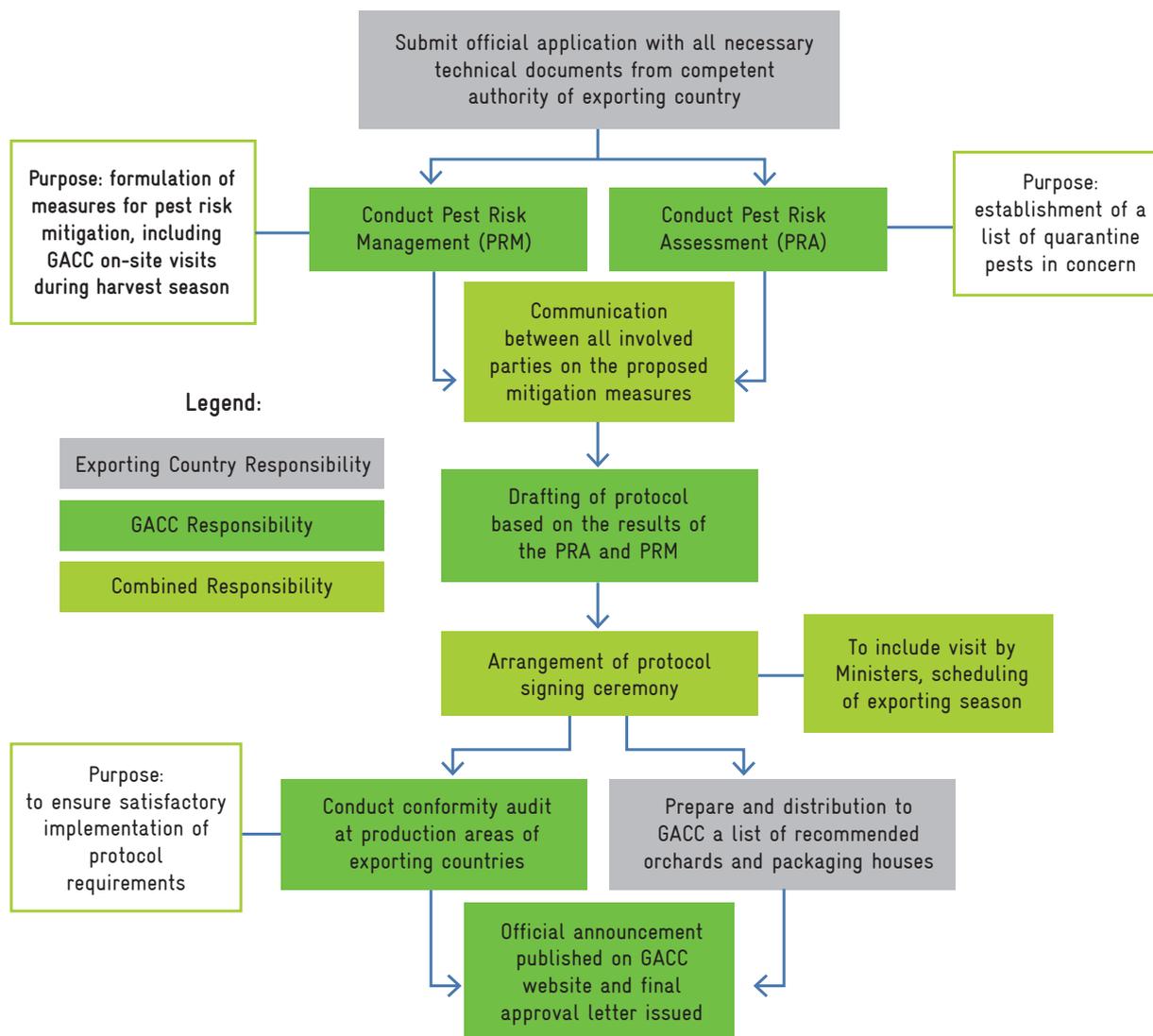
When reviewing new applications, GACC applies the following principles and criteria:

- All countries have equal opportunity to apply for market access, with one new fruit per country being processed at a time
- Applications for fruits with low phytosanitary risk receive preference and are processed more quickly
- New products must comply with existing GACC requirements for similar products from other countries and regions
- Products must be in compliance with the International Standards for Phytosanitary Measures (ISPMs) in order for GACC to conduct pest risk assessment and management
- Application processing time varies depending on the complexity and quantity of labour required along the process

Initial assessments are made based upon information provided in the application and in follow-up requests. National and regional fruit industry associations can often play an important role in market access talks by providing accurate information and demonstrating coordination among industry members. Political factors can also affect market access, as has been demonstrated with several bans by China on imported foods in the past during times of political tension. Reasons to restricting access to the Chinese market often fall into the category of phytosanitary risk. Maintaining positive bilateral relations and responding quickly to GACC with accurate information are essential for achieving market access.

¹⁵ English translation available at www.producereport.com/market-access-list

Figure 50: GACC Fruit Market Access Procedure



13.3 Required Import Documentation

Chinese importers are required to submit the following documentation to GACC for each shipment received.

Required:

- Shipping list
- Invoice
- Bill of lading
- Insurance policy
- Customs declaration
- Purchase and sale contract
- Country of origin certificate
- Phytosanitary certificate

If applicable:

- Import license
- Inspection certificates

Exporters must make sure they are able to provide these documents to their import partners in order to prevent delays, fines, or other penalties at Chinese ports of entry. Exporters also need to make sure their orchards and packinghouses are registered with GACC, which is becoming increasingly strict with regards to product traceability.

13.4 Other Governing Bodies

China's State Administration for Market Regulation (SAMR) was established in 2018 by merging three formerly-separate ministries: the General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ), the China Food and Drug Administration (CFDA), and the State Administration of Industry and Commerce (SAIC). As a result, SAMR has wide ranging functions including the regulation of intellectual property rights, food safety, anti-trust enforcement, and national certification. China's Ministry of Agriculture and Rural Affairs (MARA) shares some key roles and responsibilities with both SAMR and GACC. With SAMR, MARA supervises plant disease prevention and control, and both ministries cooperate on food safety and product traceability. With GACC, MARA develops laws and regulations governing the quarantine of animals and plants. While SAMR is primarily responsible for the domestic market, GACC plays a lead role in regulation and enforcement related to imports.

14 Challenges

14.1 Consumer Standards

Chinese consumers have high standards for fresh fruit quality and are willing to pay premiums for the best products. As the country's middle class continues to grow, consumer standards will become even higher as the world's leading fresh fruit growers and exporters compete in the market. This means that imported fruits of subpar quality or appearance may struggle to receive desirable prices in China, and miss out on the opportunity to be marketed as "imported" — a trait commonly associated with the most premium fruits. While some Southeast Asia products are already recognised as premium imported fruits, others are sold alongside lower quality domestic fruits in both wholesale and retail markets.

14.2 Market Access

Lack of official market access limits imports of several tropical fruit varieties that are popular among Chinese consumers. In particular, Vietnamese durian imports have fallen in recent years as China Customs becomes increasingly strict with gray channel trade, while Vietnamese passion fruits have become popular and could play a larger role in the Chinese market with official market access. Similarly, Laos and Cambodia have several tropical fruits in the Chinese market that could benefit greatly from legal import status, as both countries currently only have market access for bananas and watermelons¹⁶.

14.3 Domestic Competition

In general, Chinese growers will invest in crops that have seen success as imports. As a result, domestic production of some tropical fruits is increasing, forcing foreign exporters to compete on both quality and price. For example, dragon fruit was not traditionally grown in China, but domestic production of red fleshed dragon fruit quickly emerged as a strong competitor to imports from Vietnam, which share a similar season and are often considered less sweet than the domestic ones, though available at lower prices. Fruits from Vietnam, Laos, and Cambodia also face strong competition from other exporting countries to China. For instance, bananas from Vietnam and Cambodia are reported to be of lower quality than those from the Philippines and Ecuador which have a dominating presence in high-end retail outlets. Nevertheless, Vietnamese, Lao, and Cambodian bananas still enjoy demand in China as their prices are competitive and they supplement the low season of domestic production. It is also worth noting there might be competition among Vietnamese, Lao, and Cambodian fruit exporters. Once Laos and Cambodia have established more mature commercial fruit production bases, they could become stronger competitors to Vietnam which has higher land and labor costs.

¹⁶ Market access for Cambodian watermelon in progress

14.4 Cold Chain

Many fruits from Laos, Cambodia, and Vietnam are transported in unrefrigerated containers to the China border. Even fruits that are shipped in refrigerated containers are often unloaded at the border and repacked into Chinese containers, breaking the cold chain and adding product handling that can reduce value. Although this is partly due to the border-resident trade regime through which many Southeast Asian fruit are imported, it is also due to a lack of coordination among logistics providers on both sides of the borders to share containers.

14.5 Investment Environment

Chinese investments in growing operations and packing houses can help to increase exports by ensuring fruit products meet Chinese consumer demands. However, foreign investment frameworks vary considerably across countries and are influenced by multiple factors. Laos has faced serious ecological and social issues resulting from Chinese invested banana plantations that have negatively impacted perceptions of Chinese investments, even though not all investments have had such results. Cambodia is also relatively trade dependent on China and has become the target for more recent Chinese banana investments, although with claims on both sides that lessons have been learned from Laos. Vietnam, on the other hand, has a more protective investment environment to develop its domestic market, which some importers have noted as a constraint to optimizing product quality. As China continues to shift investment in fruit growing operations toward countries with cheaper land and labor than is available domestically, governments of those countries need to establish appropriate standards and regulations for such investments.

15 Recommendations

15.1 Focus on Quality

Industry experts interviewed for this research unanimously agreed that product quality is the single most important determinant of success for fresh fruit sales in China. Identifying bottlenecks in quality should be among the top priorities of fruit growers and exporters seeking to establish a presence in the Chinese market. In addition to enhancing planting, harvesting, and soil management techniques, ensuring proper post-harvest handling and appropriate logistics services are also important determinants of the condition in which fruits arrive in wholesale and consumer markets in China. Additionally, growers and exporters should focus on understanding China's preferences for fruit sizes, flavours, colours, and shapes, and consider developing products tailored specifically to those demands.

15.2 Achieve Market Access

Growers and exporters of fresh fruits that have not yet achieved formal permission for import into China, should work together to demonstrate industry coordination with regard to China's requirements, and to facilitate market access talks at the government level. If unsure of the status of market access for a particular product, they should reach out to the relevant industry association, their government's agricultural department in their home country, or the agricultural officers in their country's embassy in China. Governments, associations, and large exporters directly involved in market access talks must strive to develop positive relationships with China's regulatory bodies, and to reply to all requests quickly and with accurate information. They should also understand that market access talks may be influenced by broader diplomatic relations, and make efforts toward mutually beneficial outcomes in such contexts.

15.3 Market Research

China's consumer markets are highly dynamic and rapidly evolving. Fresh fruit suppliers should consider conducting their own market research in order to better understand market conditions and to develop an informed evidence-based strategy for their particular products. Such research should include detailed analysis of competing products, price trends, and offer actionable recommendations. It should also take into account the highly fragmented nature of China's regional markets, and the variations in preferences and consumption habits between them. In such a dynamic environment as China, such market intelligence can have a short shelf life, and therefore should ideally include a strategy to stay current with market trends.

15.4 Local Partnerships

Exporters of premium fresh fruits need to place greater emphasis on selecting import and promotional partners that can help them to achieve their potential in China. Maintaining product quality from grower to end consumer is a collaborative effort that requires dedicated management across the entire supply chain. Ensuring premium products receive the promotional attention they deserve in the right online and offline spaces also requires partners with strong local networks. Growers and exporters of premium fresh fruits should seek out opportunities to meet and develop relationships in China—not only with importers, but also with purchasing managers of leading retailers and e-commerce websites.

15.5 Marketing and Branding

In China's highly competitive fruit market, branding has become a key method for suppliers to differentiate their products, receive higher prices, and achieve greater sales volumes. Effective fruit brand marketing requires working directly with Chinese retail partners, as well as conducting public relations campaigns in China's media and on social media networks. In addition to branding for specific fruit companies and products, as evidenced by government-led fruit promotions on leading e-commerce platforms and in major retail chains, carrying out country and industry branding has also been proven highly successful in China.

15.6 Visit China

Southeast Asian fresh fruit exporters should visit China in order to better understand their target market and the distribution channels through which their products flow. Visiting China is also essential for developing relationships with potential import and promotional partners. Attending a fresh fruit trade fair, conference, or participating in a trade mission are the fastest and easiest ways to begin networking with potential partners while learning firsthand about the market with expert guidance. Face-to-face meetings are also an important part of Chinese business culture, the value of which should not be underestimated by anyone seeking to establish a presence in the China market.

16 Conclusion

China offers significant opportunities for Southeast Asian fresh fruits producers and exporters. The country's large population, enormous appetite for fresh fruits, and growing middle class mean that demand is likely to continue increasing in the 2020s. Cambodia, Laos, and Vietnam are in particularly advantageous positions to take advantage of this growth with regards to geographic proximity, preferential trade regimes, and specialization in the production of popular tropical fruit varieties. However, the competitiveness of the Chinese market means that significant efforts and funding can still be required to achieve success, and penetration into China's most lucrative consumer markets. Ensuring a high standard for product quality should be the first priority of all fruit producers targeting China, followed by taking steps to ensure that quality is maintained throughout the supply chain from producer to consumer.

Under such competitive market conditions, smallholder fruit producers can be at a significant disadvantage. They not only have limited resources to improve and scale production, but also limited ability to ensure their products reach Chinese consumers in optimal condition. For them, coordination at the industry level is the most effective strategy for improving market positioning, as well as facilitating market access talks for products not yet permitted for import into China. Fruit industry associations from many countries have cooperated directly with China's leading retailers and e-commerce websites to introduce new products, launch seasonal promotions, and help establish successful country-brand marketing campaigns—often with the assistance of their relevant government offices in embassies and consulates in China.

Southeast Asian fruit exporters, associations, and governments also need to understand specific bottlenecks in the supply chain and take steps to manage them. In particular, border trade import regimes incentivise breaks in the cold chain and additional product handling that negatively impact value. This can be prevented through coordination and container sharing among logistics providers on both sides of the border. However such coordination may not occur without deliberate facilitation by a large producer, purchaser, association, or government stakeholder. China's consumer markets and regulatory environment are also both highly dynamic and require constant monitoring to assess challenges and opportunities as they arise. Southeast Asian fresh fruit industry stakeholders are advised to dedicate resources to regular market intelligence reporting in order to base their strategies and efforts on accurate, up-to-date information.

17 Appendix: Trade Shows and Conferences

Event	2020 Dates	Location
China International Fruit & Vegetable Fair (ChinaFVF) en.chinafvf.com	TBD	Beijing
China International Import Expo (CIIE) www.ciie.org/zbh/en	TBD	Shanghai
Asia Fruit Logistica www.asiafruitlogistica.com	September 16-18	Singapore
ifresh Asia Fruit & Vegetable Industry Expo en.ifreshfair.cn	November 10-12	Shanghai
Asia Fresh www.asiafreshexpo.com	November 27-28	Shanghai

18 Appendix: Market Contacts

The following contacts represent a collection of companies and organizations identified during this research as relevant for small and medium fresh fruit exporters and other stakeholders from Cambodia, Laos, and Vietnam. Inclusion, exclusion, and ordering in the below tables does not imply any endorsement or preference by GIZ or its market research partner. Please email the SRECA Project and its research partners at sreca@giz.de for additional details regarding specific contacts.

Government Offices for Border Trade

Office	Province/Region	Contact
Kunming Customs Office	Yunnan	+86 871 63016999 kunming.customs.gov.cn
Hekou Entry & Exit Inspection and Quarantine Bureau	Yunnan	+86 873 3426689
Mengla CIQ (Mohan Port)	Yunnan	+86 691 8811030
Pingxiang Customs	Guangxi	+86 771 8520101

Wholesale Markets

Company	Contact
Shanghai Longwu Fruits and Vegetables Wholesale Trading Market Management Co., Ltd.	wangcx@esenagro.com +86 13501653481 www.lwfruit.com
Guangzhou Jiangnonghui Market Service Management Co., Ltd.	jiangnonghui@outlook.com +86 20 81990213
Shanghai Huizhan Fruit and Vegetable Market Management Co., Ltd.	huizhanguoshu@163.com +86 21 64919766 www.huizhanmarket.com
Jiaxing Haiguangxing Market Management Co., Ltd.	+86 573 82396666/82031520
Guangxi HiGreen Wholesale Market	924511948@qq.com / gxhjxsyglgs@szap.com +86 771 4979739 www.gxhigreen.com
Kunming Jinmazhengchang Fruit Market	+86 871 5190985 jmzcsqsc.cn.china.cn

Logistics & Supply Chain

Company	Contact
Richshine Supply Chain Management (Shanghai) Co., Ltd.	sreca@giz.de
Shanghai Oheng Import & Export Co., Ltd.	sreca@giz.de
Guangxi TWT Supply Chain Management Co., Ltd.	sreca@giz.de
Wenwu Import and Export Co. Ltd.	sreca@giz.de

Retail & E-commerce

Company	Business	Contact
Wellfruit	Fresh fruit retail chain	sreca@giz.de
FruitDay	Fresh fruit e-commerce	sreca@giz.de
Yonghui	Supermarket chain	sreca@giz.de
Pagoda	Fresh fruit retail chain	sreca@giz.de
City Super	Supermarket chain	sreca@giz.de
Xianfeng Fruit Co., Ltd.	Fresh fruit retail chain	sreca@giz.de

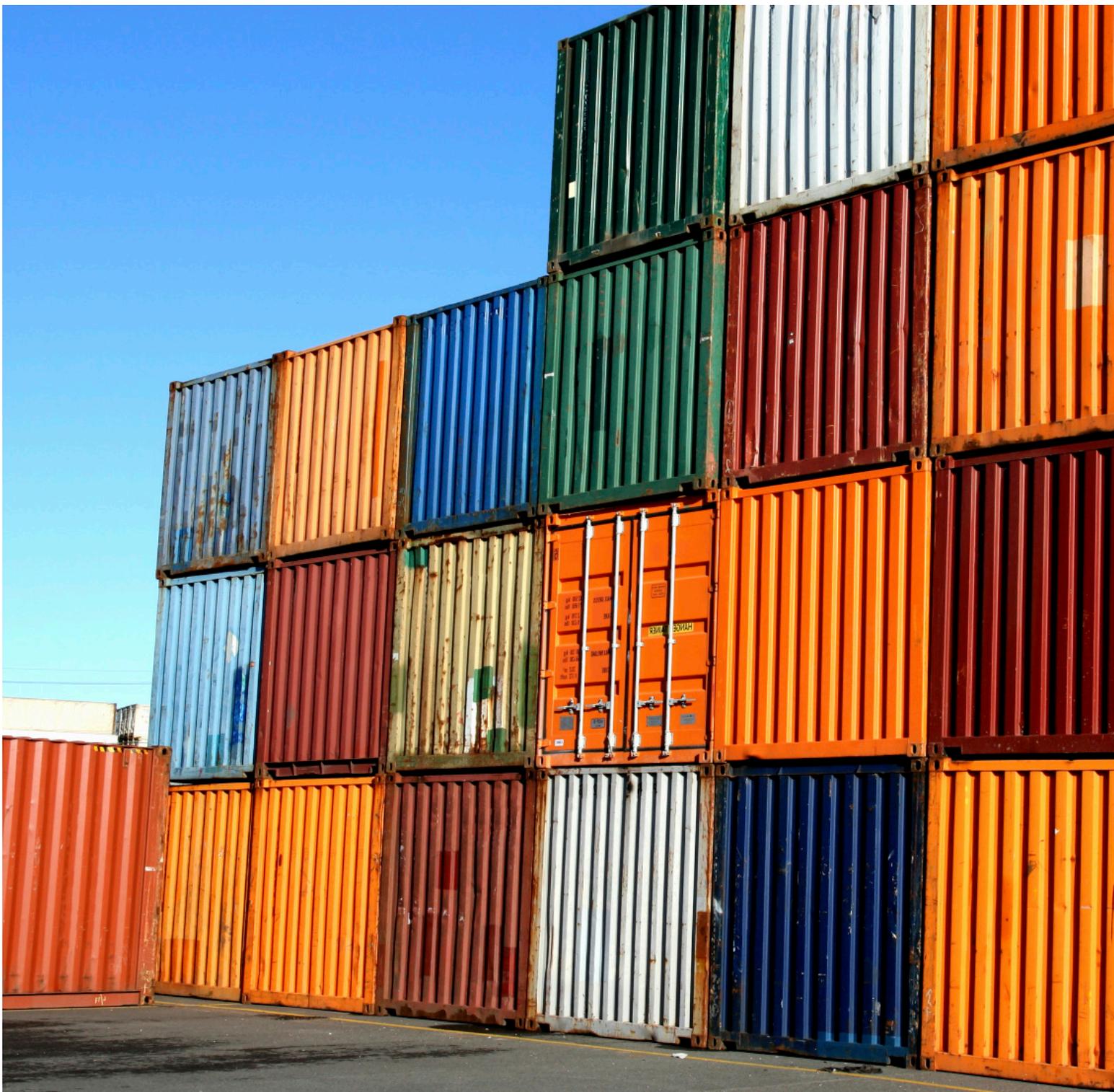
Importers

Company	Contact
Win-Chain Supply Chain Management Co., Ltd.	sreca@giz.de
Goodfarmer Group	sreca@giz.de
Shanghai Sofia International Trading Co., Ltd.	sreca@giz.de
Shanghai Yechen Industrial Co., Ltd.	sreca@giz.de
Chongqing Golden Orchard Trading Co., Ltd.	sreca@giz.de
Nanchang Lvheng Industrial Development Co., Ltd.	sreca@giz.de
Guangzhou Zhanhui Trading Co., Ltd.	sreca@giz.de
Shenzhen Yuanxing Fruit Co., Ltd.	sreca@giz.de
Joy Wing Mau Group	sreca@giz.de
Beijing Xinghuirong Trading Co., Ltd.	sreca@giz.de
Beijing Yongxin Heng Chang Fruit Co., Ltd.	sreca@giz.de
Zhengzhou Chen's Sun Fruit and Vegetable Trade Co., Ltd.	sreca@giz.de
Dole (Shanghai) Fruits and Vegetables Trading Co., Ltd.	sreca@giz.de
Jiaxing Hua Lian Fruit Co., Ltd.	sreca@giz.de
Jiaxing Yourhome Fruit Co., Ltd.	sreca@giz.de
Xingyeyuan Group	sreca@giz.de
Shanghai Zelun Trade Company	sreca@giz.de

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